WI-FI EVERYWHERE: UNIVERSAL BROADBAND ACCESS AS ANTITRUST AND TELECOMMUNICATIONS POLICY

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> How America deploys broadband is the central infrastructure challenge our country faces . . . . How we get it done affects not only how many megabytes of information our computers can download, but . . . what kinds of opportunities will be available to those in our society who do not share fully in our general prosperity.[1]

> Municipal networks can play an essential role in making broadband access universal and affordable. We must not put up barriers to this possibility of municipal involvement in broadband deployment. . . . Community broadband networks have the potential to create jobs, spur economic development, and bring a 21st century utility to everyone.[2]

INTRODUCTION

Cheap, ubiquitous high-speed Internet access promises to accelerate economic growth, create new jobs and industries, advance education and lifelong learning, improve health care decision-

1. FED. COMMC'NS COMM'N, INQUIRY CONCERNING HIGH-SPEED ACCESS TO THE INTERNET OVER CABLE AND OTHER FACILITIES, 17 F.C.C.R. 4798, 4872 (2002) [hereinafter HIGH-SPEED ACCESS INQUIRY 2002] (dissenting statement of Commissioner Michael J. Copps).

2. 151 CONG. REC. S7298 (daily ed. June 23, 2005) (statement of Sen. Lautenberg).

making, and raise living standards.[3] Conversely, foregone broadband access by poor and underserved Americans is imposing high economic and social costs.[4] As much as $1 trillion in economic growth may be delayed due to structural and legal limitations on U.S. broadband access.[5] Americans without broadband will be unlikely to participate in the estimated $1 trillion market for electronic commerce conducted over the Internet.[6] Many children and young people in households without broadband are unnecessarily denied the opportunity to leverage the Internet's rich resources for study and research purposes, so as to achieve their full potential.[7] And families without broadband will struggle to become "active and informed participant[s] in their own health care" by finding potentially lifesaving treatments online.[8]

Since 2004, city officials across the United States have increasingly endorsed the idea of providing universal broadband access to their

3. FLORIDA MUNICIPAL ELECTRIC ASSOCIATION (FMEA), THE CASE FOR MUNICIPAL BROADBAND IN FLORIDA 2 (2005), http://www.baller.com/pdfs/fmea_white_paper.pdf.

4. *See id.* at 17 (asserting that towns without high-speed broadband access will lose jobs and people in underserved locations will not have access to important economic, medical, and educational opportunities).

5. *See* Charles H. Ferguson, The Broadband Problem: Anatomy of a Market Failure and a Policy Dilemma 5 (2004) ("[T]he economic costs of constraints to broadband deployment have already been large and could amount to hundreds of billions of dollars over the next decade, possibly reaching $1 trillion."); Thomas Bleha, Down to the Wire, Foreign Aff., May-June 2005, at 111, 121, *available at* http://www.foreignaffairs.org/20050501faessay84311/thomas-bleha/down-to-the wire.html?mode=print (noting that the $1 trillion figure reflects only the economic costs of lagging broadband deployment and does not reflect costs associated with foregone opportunities for telecommuting or accessing medical care, education, or entertainment).

6. *See* FERGUSON, *supra* note 5, at 32 (adding that many leading firms from diverse industries now conduct much of their business over the Internet).

7. *Cf.* Lisa Guernsey, *The Library as the Latest Web Venture*, N.Y. TIMES, June 15, 2000, at G1, *available at* http://www.nytimes.com/library/tech/00/06/circuits/articles/15 book.html (describing how electronic access to information is becoming more common and more central to educational process); David Hoye, *Use of Public Libraries Grows with Internet*, SACRAMENTO BEE, Sept. 19, 2002, at D1 ("Pew Internet and American Life survey released this week found that sevety-three percent of college students use the Internet more than they use the library.").

8. Information Infrastructure Task Force, *The National Information Infrastructure: Benefits and Applications* (1993), http://www.ibiblio.org/nii/NII-Benefits-and-Applications. html; April KirkHart et al., *Helping Our Children Succeed: What's Broadband Got to Do with It?*, 3 CHILDREN'S PARTNERSHIP ISSUE BRIEF (June 2006), http://www.techpolicybank.org/AM/Template.cfm?Section=Publications_from_The_Children_s_Partnership&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=9418 (Internet access "can improve children's health and their access to health care by improving the quality of care, helping children and parents manage chronic conditions more effectively from home (producing cost savings), allowing access to vital health information, [etc.]").

citizens.[9] They hope to deploy wireless fidelity ("Wi-Fi") mesh networks to cast high-speed Internet signals across entire metropolitan areas. San Francisco Mayor Gavin Newsom has proclaimed that he will not rest "until every San Franciscan has access to free wireless internet service."[10] Philadelphia is planning to provide Wi-Fi broadband access for a mere $10 to $20 a month throughout 135 square miles of the city.[11] New York City has solicited bids on a project to build "the largest municipal wireless network ever established," which would blanket Manhattan with broadband Internet access beamed to computers, portable digital devices, and emergency response personnel, even in vehicles moving at high speeds.[12] Cities from Miami to Atlanta to Chicago to Portland have proposed to equalize high-speed Internet service through publicly-funded Wi-Fi "clouds" wafting high-speed Internet signals across many miles.[13] Finally, New Orleans has launched the nation's first

9. *See* Robert MacMillan, *Life, Liberty and Free WiFi*, WASHINGTONPOST.COM, May 2, 2005, http://www.washingtonpost.com/wp-dyn/content/article/2005/05/02/AR20050502 00449.html (identifying municipalities throughout the country that are providing or seeking to provide Wi-Fi to their citizens).

10. Office of the Mayor, City and County of San Francisco, *Newsom Calls for "Revolution of Solutions" in His Annual State of the City Address* (Oct. 21, 2004), http://www.sfgov.org/site/mayor_page.asp?id=27976.

11. *See* City of Philadelphia, *Mayor Street Announces Signing of Agreements With Earthlink to Bring Wireless Access to Every Philadelphia Neighborhood: Project Will Make Philadelphia Nation's Largest WiFi Hotspot with No Cost to Taxpayer* (Mar. 2006), http://ework.phila.gov/philagov/news/prelease.asp?id=233; The Wireless Philadelphia Executive Committee, *Wireless Philadelphia Business Plan* 12, 39 (Feb. 9, 2005), http://www.phila.gov/wireless/pdfs/Wireless-Phila-Business-Plan-040305-1245pm.pdf; Matt Richtel, *Pennsylvania Limits Cities in Offering Net Access*, N.Y. TIMES, Dec. 2, 2004, at C6; MacMillan, *supra* note 9; Shane Peterson, *Boiling Point*, GOVERNMENT TECH., Nov. 2005, http://www.govtech.net/magazine/story.php?id.

12. *The Big Apple Goes Wireless*, BIZED, Sept.-Oct. 2004, at 50. This network appears to be for the use of city employees; plans for a network of wireless Internet access points in city parks and underserved neighborhoods have stalled. *See Wi-Fi and the Cities*, N.Y. TIMES, June 6, 2006, at A20 (explaining how New York is "dragging" on providing "free or low-cost access in its densely populated, poor neighborhoods"); Melanie Lefkowitz, *Free Wi-Fi Access Internet Connections; NYC Unplugged: Parks Going Wireless*, NEWSDAY (NEW YORK), July 3, 2006, at A6 (announcing that Wi-Fi in New York's "large parks" is delayed for three years).

13. *See, e.g.*, Miami-Dade County, *Wireless Miami-Dade* (2005), http://www.miamidade.gov/mayor/wireless.asp ("Over the next two years, we will seek to offer low-cost, high-speed Internet access to all. We will work with the private sector to create a Miami-Dade County with its own wireless network."); Gregory M. Lamb, *Free Net Access from the Mayor?*, CHRISTIAN SCI. MONITOR, Dec. 23, 2004, at 14 (providing an overview of the municipal broadband movement and detailing Atlanta's broadband rollout); Dan O'Shea, *Muni Mess*, TELEPHONY, Mar. 14, 2005, at 30 (describing Chicago's efforts to construct a municipal Wi-Fi network in the face of opposition from the Illinois General Assembly); John Ness, *Wi-Fi Clouds Arrive*, NEWSWEEK, Apr. 18, 2005, at E16-17 (describing Portland, Oregon's plan to blanket the city with low-cost Wi-Fi and the challenges, such as installation expenses, coverage gaps, and opposition from telecoms, that are likely to be faced by the city).

free city-owned wireless broadband network, with plans to expand citywide to spur economic redevelopment.[14]

Citywide Wi-Fi as a public service is no longer a bureaucratic pipe dream, but has the backing of America's technological titans. Google and Earthlink have pledged to debut free advertiser-sponsored citywide Wi-Fi broadband in San Francisco if the city gives the green light.[15] Earthlink won the Philadelphia contract to "provide 'reasonably priced' access," and hopes to provide broadband equipment to forty more city-supported broadband projects in the near future.[16] Intel plans to unveil Wi-Fi across 1,500 square miles of Silicon Valley, and endorsed a bill in Congress that would liberate municipalities from anticompetitive restraints on their ability to contract with technology companies for city-supported Wi-Fi.[17]

Although universal access to telecommunications services is at the core of American telecommunications law and policy, the United States has fallen far short of achieving this goal. More than thirty percent of American homes lacked Internet access in 2003,[18] often

14. *See* Jonathan Krim, *New Orleans's New Connection; City-Owned Wi-Fi System to Be Announced Today*, WASH. POST, Nov. 29, 2005, at D01 (explaining how the city's plan is part of an effort to reinvigorate the economy after Hurricane Katrina).

15. *See* Joseph Mallia, *Free Wi-Fi Access Internet Connections: LI to Go Wireless–and Priceless?*, NEWSDAY (NEW YORK), July 3, 2006, at A7 ("In San Francisco, the city and Google are finalizing a contract to provide free wireless access to everyone throughout the 50-square-mile city, in exchange for Google being allowed to show online advertising."); Ryan Kim, *S.F. Wi-Fi Network Bidding Heats Up; Google, Earthlink Team to Lead Field of Competitors*, S.F. CHRON., Feb. 23, 2006, at C1 (reporting that the "Earthlink-Google bid includes free download speeds of about 300 Kbps that will include local advertising. The premium service will feature a download speed of 1 Mbps for about $20 a month").

16. Mallia, *supra* note 15, at A7. *See* Alex Goldman, *Winning Municipal Business*, ISP PLANET, Oct. 10, 2005, http://www.isp-planet.com/news/2005elnk_muni_051010.html (noting that Earthlink is optimistic about the future of its municipal wireless business).

17. Joshua Sabatini, *Vast Wi-Fi Network To Cost $250M*, KNIGHT-RIDDER TRIB. BUSINESS NEWS - PALO ALTO DAILY NEWS, Apr. 7, 2006 (crediting Intel Solutions Services with plan); Intel Corp., *Intel Corporation Praises Legislative Approach on Muni Networks* (July 15, 2005), *available at* http://www.freepress.net/docs/intel_s.1294_v1.1.pdf; *see also* Henry J. Gomez, *Intel Imagines Wireless Cleveland*, CLEVELAND PLAIN DEALER, Apr. 7, 2005, at A1 (noting that Intel has chosen Cleveland, Ohio as a "participant[] in its Digital Cities Initiative" to provide "Intel funding and professional support to regions looking to enhance their wireless communications"); Intel Corp., *Intel Pledges 1500 PCs, Wireless Access Points, Technical Support for Hurricane Katrina Disaster Relief Efforts* (Sept. 5, 2005), http://www.intel.com/pressroom/archive/releases/20050902corp.htm (discussing that Intel donated computers and Wi-Fi equipment to help eliminate "communication problems [that] have been a major challenge in coordinating disaster recovery, rescue, and care efforts").

18. U.S. DEPARTMENT OF COMMERCE, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, A NATION ONLINE: ENTERING THE BROADBAND AGE, fig. 12 (Sept. 2004), http://www.ntia.doc.gov/reports/anol2004/NationOnlineBroadband04.htm [hereinafter A NATION ONLINE]. Nearly thirty percent of surveyed Americans described themselves as non-users of the Internet as of 2006. *See* Mary

because it was too expensive.[19] Roughly two-thirds of American households did not have high-speed Internet access in 2005.[20] One-fifth of Americans have never used the Web at all.[21]

The provision of high-speed Internet access by private industry alone is leaving behind most of the poor, vast numbers of racial and ethnic minorities, and many residents of rural and inner-city communities.[22] Such unequal access to computers, electronic networks, telecommunications services, or information based on demographic or socio-economic factors such as income, race, gender, age, or location is known as a "digital divide."[23] Forbidding monthly fees and surcharges for broadband, at up to five times the cost of a dial-up Internet connection, remain the principal obstacle to universal broadband connectivity to the Internet.[24] For tens of millions of families, broadband is simply too expensive; the average family with high-speed access boasts an annual income of $72,000,[25]

Madden, *Internet Penetration and Impact* 3, PEW INTERNET & AMERICAN LIFE PROJECT (Apr. 2006) ("[O]ur latest survey, fielded February 15–April 6, 2006 shows that fully 73% of respondents (about 147 million adults) are Internet users, up from 66% . . . in our January 2005 survey."),

19. *See* U.S. DEPARTMENT OF EDUCATION, BRIEFING MEMO: THE DIGITAL DIVIDE 3 (Apr. 2004), http://www.ed.gov/about/bdscomm/list/acsfa/digitaldiv.doc ("In a 2001 survey, the largest specific response to why households do not have Internet in their homes was 'too expensive.'").

20. Mike Dorning, *Fundraising Clicks Over Internet*, CHICAGO TRIB., Jan. 8, 2006, at C11; Katharine Q. Seelye, *At Newspapers, Some Clipping; Jobs Are Cut as Ads and Readers Move Online*, N.Y. TIMES, Oct. 11, 2005, at C1; Birgitta Forsberg, *The Future is South Korea*, S.F. CHRON., Mar. 13, 2005, at B1.

21. Bob Keefe, *Survey Finds 1 in 5 Americans Have Never Used the Web*, CHATTANOOGA TIMES FREE PRESS, Oct. 9, 2005, at C6.

22. *See* Maggie Jackson, *Nonprofit Builds A Bridge Across the Digital Divide*, BOSTON GLOBE, June 04, 2006, at G1 ("Just 23 percent of households with annual incomes of less than $15,000 have home Internet access . . . ."); KirkHart et al., *supra* note 8, at 4 ("In 2003, only 26% of children ages 7-17 had access to broadband in their homes, and low-income children were one-seventh as likely to have broadband at home compared to children in higher income households."); NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET: DEFINING THE DIGITAL DIVIDE 5-9 (1999), *available at* http://www.ntia.doc.gov/ntiahome/fttn99/FTTN.pdf (presenting demographic and geographic traits that are "significant determinants of a household's likelihood of owning a computer or accessing the Internet from home").

23. KirkHart et al., *supra* note 8, at 2.

24. *See* Jim Hu, *Study: Price Matters for Broadband*, CNET NEWS.COM (Oct. 13, 2003), http://news.com.com/2100-1034-5090434.html?part=dht&tag=ntop ("Sixty-three percent of dial-up households said they would not upgrade to broadband because it's too expensive . . . ."); Peter K. Yu, *Bridging the Digital Divide: Equality in the Information Age*, 20 CARDOZO ARTS & ENT. L.J. 1, 12 (2002) (pointing out that "the expensive fees for high-speed Internet access" may preclude half of Americans from subscribing to it, and that "the high cost of Internet connection remains the major barrier to Internet access").

25. CORPORATION FOR PUBLIC BROADCASTING, CONNECTED TO THE FUTURE: A REPORT ON CHILDREN'S INTERNET USE 8 (Mar. 19, 2003), http://www.cpb.org/stations/reports/ connected/connected_report.pdf.

two-thirds more than the $43,000 earned by the typical American family.[26] For others, including many American households in rural or underserved areas, broadband access is totally unavailable.[27]

The most controversial proposed solution to these gaps in broadband access has been for municipal governments, i.e. cities and counties, to offer broadband access as a public service. Over 600 municipalities offered such service as of 2005, a small but rapidly growing percentage of the over 18,000 municipalities in the United States.[28] Currently, however, more than fourteen U.S. states prohibit or restrict cities and counties from ensuring universal broadband access.[29] Despite the proliferation and growing importance of such state law restraints, most legal scholarship on broadband policy has focused on common carrier rules imposed on broadband infrastructure providers,[30] rather than federal and state laws on municipal competition in broadband markets.[31]

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26. U.S. CENSUS BUREAU, INCOME STABLE, POVERTY UP, NUMBERS OF AMERICANS WITH AND WITHOUT HEALTH INSURANCE RISE, CENSUS BUREAU REPORTS (Aug. 26, 2004), http://www.census.gov/Press-Release/www/releases/archives/income_wealth/002484.html.

27. *See* A NATION ONLINE, *supra* note 18, at Executive Summary (reporting that only 24.7% of households in rural areas have broadband connections, and 22.1% of rural households with dial-up connections report that they do not have broadband because it is not available to them, while another 35% did not know whether it was available or not).

28. David Tuerck, *The Competitive Effects of Municipal Provision of Wireless Broadband*, NEW MILLENNIUM RESEARCH COUNCIL (NMRC), NOT IN THE PUBLIC INTEREST: THE MYTH OF MUNICIPAL WI-FI NETWORKS 20 (Feb. 2005), http://www.newmillennium research.org/archive/wifireport2305.pdf.

29. *See* Lautenberg, *supra* note 2 ("The 'Community Broadband Act' is in response to those efforts by States to tell local communities that they cannot establish networks for their citizens . . . ."). As many as thirty-two states limited municipal broadband to some extent as of 2004. CALIFORNIA PUBLIC UTILITIES COMMISSION, DRAFT REPORT ON BROADBAND DEPLOYMENT IN CALIFORNIA, Appendix B (2004), http://www.cpuc.ca.gov/PUBLISHED/ COMMENT_DECISION/43588.htm.

30. *See generally* Mark Cooper, *Unbundling and Open Access Policies: Open Access to the Broadband Internet: Technical and Economic Discrimination in Closed, Proprietary Networks*, 71 U. COLO. L. REV. 1011 (2000) (making a case for open access to broadband networks acquired by AT&T via mergers and acquisitions); James Speta, *Handicapping the Race for the Last Mile?: A Critique of Open Access Rules for Broadband Platforms*, 17 YALE J. ON REG. 39 (2000) (concluding that open access rules for broadband would not benefit the industry); Mark Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925 (2001) (cautioning against changes imposed by broadband cable providers on the end-to-end architectural structure of the Internet); Tim Wu, *The Broadband Debate: A User's Guide*, 3 J. ON TELECOMM. & HIGH TECH. L. 69 (2004) (describing debates among economists and legal scholars concerning merits of open and closed networks); Steven Aronowitz, Brand X Internet Services v. FCC*: The Case of the Missing Policy Argument*, 20 BERKELEY TECH. L.J. 887, 890-91 (2005) (describing how the shift to open access in the telecommunications industry enhanced consumer choice and industry competition).

31. Of the two major scholarly forays into the municipal broadband debate, both predated the Supreme Court's 2004 holding in *Nixon v. Missouri Municipal League*,

The primary thesis of this Article is that Congress and the states should encourage cities and counties to provide free and low-cost Wi-Fi broadband to their citizens. The American public has a compelling national interest in equalizing access to computers and the Internet across racial, economic, and geographical lines.[32] Municipal broadband projects, and particularly the provision by cities and counties of free or low-cost wireless broadband networks partially subsidized by tax revenues, hold great potential to bridge the digital divide.[33] Existing municipal broadband efforts in the United States, as well as state-subsidized broadband deployment in other nations, have already successfully brought broadband to previously underserved areas.[34]

Part II describes the history of the broadband market in the United States, and the anticompetitive implications of the market's natural monopoly and network industry characteristics. Part III contends that a trio of recent Supreme Court cases construing the Telecommunications Act of 1996 (the "1996 Act") achieved a sweeping deregulation of the broadband industry.[35] This has empowered the owners of broadband infrastructure with natural monopoly characteristics, such as telephone and cable networks, to act with near impunity to impair their smaller rivals' ability to

541 U.S. 125 (2004), that Congress had not preempted anticompetitive state laws outlawing municipal telecommunications projects. The first significant scholarly treatment of municipal broadband projects was generally supportive, *see* Steven Carlson, *A Historical, Economic, and Legal Analysis of Municipal Ownership of the Information Highway*, 25 RUTGERS COMPUTER & TECH. L.J. 1 (1999) (concluding that municipalities should take the lead in providing broadband to their citizens as a means to increasing accessibility to information), while the second was generally critical, *see* Kathryn Tongue, Comment, *Municipal Entry Into the Broadband Cable Market: Recognizing the Inequities Inherent in Allowing Publicly Owned Cable Systems to Compete Directly Against Private Providers*, 95 NW. U. L. REV. 1099 (2001) (arguing that allowing municipalities to compete in the broadband market would be anticompetitive). Neither scholar discussed proposed federal legislation, such as the Preserving Innovation in Telecom Act of 2005, to ban municipalities from contributing to increased competition in broadband markets and more equitable access to high-speed Internet service. *See infra* Part IV.A (describing how the law would outlaw municipal broadband services similar to those provided by a private firm in the area).

32. *See* Lautenberg, *supra* note 2 (stating that the Community Broadband Act of 2005 will "promote economic development, enhance public safety, increase educational opportunities, and improve the lives of citizens . . . .").

33. *See infra* Part IV.C.2 (arguing that municipal broadband projects can provide Internet access to underserved communities at relatively low cost per user).

34. *See infra* Part IV.C.2-3 (describing municipal broadband initiatives in rural Kentucky and Iowa, as well as in Canada, Japan, South Korea, and Sweden, among other countries).

35. *See infra* Part III (proposing that deregulation makes the role of municipalities in providing broadband access more vital because without regulations ensuring universal access many rural and underprivileged areas will continue to not be served).

compete.[36] As a result, congressional action is necessary to reinvigorate competition and promote municipal participation in the broadband marketplace.

Finally, Part IV endorses aspects of a bill being considered in the U.S. Senate, the Advanced Telecommunications and Opportunity Reform Act of 2006, which would remedy the growing digital divide[37] by preempting state laws that prevent municipalities from setting up Wi-Fi networks.[38] Such a reform of the 1996 Act will best promote the federal policy of ensuring universal broadband service at affordable prices by accelerating the municipal provision of broadband to underserved communities.[39] Permitting state regulation and management of municipal broadband will adequately protect the interests of the private broadband industry and the public in preserving the viability of commercial projects.[40]

I. THE DEVELOPMENT AND MARKET STRUCTURE OF THE BROADBAND INDUSTRY

A. Broadband Access in its Historical Context

Telecommunications services such as telephone and broadband Internet present a natural monopoly problem when they are regulated by private property rules that are not accompanied by price and output regulation under antitrust and/or telecommunications

36. *See id.* (detailing how in the absence of antitrust and telecommunications regulation, cable and telephone companies may impair competition, inflate prices, reduce innovation and output, and delay universal broadband access).

37. *See infra* Part IV (reciting statistics that show that the gap between Internet users and non-users continues to grow across racial, educational, and socio-economic lines).

38. *See id.* (asserting that municipal broadband projects have prevented many underserved municipalities from being relegated to the wrong side of the digital divide).

39. *See* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(c) (2006) ("No State or local government statute, regulation, or other State or local government legal requirement may prohibit or have the effect of prohibiting any public provider from providing, to any person or any public or private entity, advanced communications capability or any service that utilizes the advanced communications capability provided by such provider."). The Senate Commerce Committee renamed this bill the Advanced Telecommunications and Opportunity Reform Act of 2006 prior to referring it to the full Senate. *See* Bary Alyssa Johnson, *Senate Committee Cuts Net Neutrality Amendment*, PC MAGAZINE/ABC NEWS.COM, June 29, 2006, http://abcnews.go.com/Technology/ZDM/story?id=2138.

40. *See* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(d) (2006) (setting forth antidiscrimination safeguards requiring public providers to subject themselves to regulations they imposed, or which are imposed by state or local laws, on similarly situated privately-owned providers, and requiring them to grant privately-owned providers open access to conduits, trenches, and locations used by the public provider).

law.[41] Federal telecommunications policy developed under the shadow of what Congress called the "telephone monopoly" of American Telephone & Telegraph Co. ("AT&T") and its affiliates, which had obtained unified national control over telephone service.[42] Prior to 1880, Alexander Graham Bell had invented and patented the telephone, and founded the American Bell Telephone Company.[43] AT&T built the first long-distance telephone network, and acquired American Bell, its former corporate parent, creating the Bell System, a single "'comprehensive' and 'universal' telephone network, 'extending from every door to every other door . . . .'"[44]

AT&T's dominance over the nation's telecommunications infrastructure eventually collided with the federal antitrust laws. In 1913, the U.S. Department of Justice filed suit against AT&T for monopolizing and conspiring to restrain interstate trade and commerce in telecommunications.[45] The settlement in the case established the ground rules for telecommunications as they would stand until 1934: AT&T secured many local monopolies, but agreed to let independent telephone companies interconnect with its network, and divested its stake in the telegraph industry.[46]

41. *See* Mark Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 490, 546-49 (1998) (noting that telephone network has been deemed a "natural monopoly" given the "cost advantage of market share in telephone networks," such that that "it is most efficient for one producer to serve the entire market," and that "property rights created by legal rules" restrict consumers from switching between competing networks); Aronowitz, *supra* note 30, at 891 ("[P]arts of the telecommunications industry are natural monopolies. . . . The fixed costs associated with installing local wires between customers' homes and nearby aggregation centers make multiple competing networks, each with a last mile wire connection to all consumers, inefficient.").

42. MCI v. AT&T, 512 U.S. 218, 235 (1994) (Stevens, J., dissenting) (quoting S. REP. NO. 73-781, at 2 (1934)) (arguing for a flexible approach to regulating the telephone monopoly).

43. Regional Bell Operating Companies, *Bell Symbol History* (2005), http://www.bell. com/chron.htm.

44. Patricia Worthy, *Racial Minorities and the Quest to Narrow the Digital Divide: Redefining the Concept of "Universal Service,"* 26 HASTINGS COMM. & ENT. L.J. 1, 7 (2003) (quoting Theodore N. Vail, President of AT&T in 1907) (internal citations omitted).

45. *See* FERGUSON, *supra* note 5, at 12 (explaining that the government antitrust action resulted in a "negotiated agreement" that is referred to as the Kingsbury Commitment).

46. *See* AT&T, *Milestones in AT&T History*, http://www.att.com/history/milestones.html (claiming that the Kingsbury Commitment "establishe[d] AT&T as a government sanctioned monopoly. In return AT&T agree[d] to divest the controlling interest it had acquired in the Western Union telegraph company, and to allow non-competing independent telephone companies to interconnect with the AT&T long distance network."); FERGUSON, *supra* note 5, at 12 (stating that pursuant to the 1913 settlement AT&T agreed to stop acquiring other telephone companies).

The Communications Act of 1934 ("1934 Act") declared a federal policy of universal access to communications services.[47] With the 1934 Act, Congress resolved "to make available, so far as possible, to all the people of the United States, a rapid, efficient, Nation-wide and world-wide wire and radio communication service with adequate facilities at reasonable charges."[48] For most of its history, the Federal Communications Commission ("FCC") carried out its mission by regulating AT&T as the telephone monopolist, including by setting its prices and monitoring its progress toward achieving universal service.[49] Unfortunately, the FCC proved to be incapable of effectively enforcing the 1934 Act's mandate that AT&T act as a common carrier and discipline its pricing.[50]

Competition in the long-distance telephone market, but not the local telephone markets, began to be unleashed when the courts rebuffed the FCC's attempt to exclude potential competitors to AT&T, such as MCI and Sprint, from selling long distance.[51] The

47. *See* Mark Cooper, *Universal Service: A Historical Perspective and Policies for the Twenty-First Century* ch. 1 (1996), *available at* http://www.benton.org/publibrary/uniserv-prospective/prospects.html (reporting that the Act was committed to ensuring that not only the telephone infrastructure connect all Americans but also that telephone service be affordable to all Americans as well).

48. MCI v. AT&T, 512 U.S. 218, 235 (1994) (Stevens, J., dissenting) (quoting Communications Act of 1934 § 1, 47 U.S.C. § 151).

49. *See* Lemley & McGowan, *supra* note 41, at 549 (explaining that the FCC "took its mandate to be the exclusion of competition from the telephone market, and the regulation of AT&T as a monopoly provider . . . ."); FERGUSON, *supra* note 5, at 12-13 (noting that although the 1934 Act itself did not prevent competition, AT&T's position in the telecommunications market led the FCC to regulate it as a monopoly).

50. *See* United States v. AT&T, 552 F. Supp. 131, 168 (D.D.C. 1982) (relating the testimony of two former chiefs of the FCC's Common Carrier Bureau who both claimed that the organization was unable to prevent AT&T from maintaining its monopolistic behavior).

51. Robert W. Crandall, *The Remedy for the "Bottleneck Monopoly" in Telecom: Isolate It, Share It, or Ignore It?*, 72 U. CHI. L. REV. 3, 6 (2005). For example, when the FCC attempted to exclude MCI from the market for ordinary long distance telephone calls, a federal appeals court annulled the action, chiding the FCC for having "propagate[d] monopoly for monopoly's sake." MCI v. FCC, 561 F.2d 365, 380 (D.C. Cir. 1977). MCI fought AT&T on other fronts for the right to compete, including in the political sphere and by commencing antitrust litigation. *See* FERGUSON, *supra* note 5, at 14 (stating that the antitrust litigation revealed much regarding AT&T's anticompetitive practices). In its antitrust case, MCI's expert testified that AT&T priced its private line telephone service below the cost of providing the service, so as to "incur major losses in cutting its rates to stifle competition." MCI Commc'ns Corp. v. AT&T, 708 F.2d 1081, 1125-27 (7th Cir. 1983). A federal jury awarded MCI $1.8 billion in damages for AT&T's violations of the antitrust laws, but the Seventh Circuit reversed and remanded the verdict based on its view of the inadequacy of MCI's evidence and legal theories. *See id.* at 1092, 1174 ("We conclude that the jury's award of damages and certain jury findings on the merits lack evidentiary support or are otherwise improper as a matter of law, so that they must be set aside."). MCI won much less, about $113 million, on remand. *See* James B. Speta, *Antitrust and Local Competition Under the Telecommunications Act*, 71 ANTITRUST 99, 123

federal government pried the telecommunications market open still further when it put AT&T on trial for monopolizing the telephone industry, charges that AT&T agreed to settle in 1982 by divesting itself of its operating companies that supplied local telephone service.[52] Two years later, AT&T completed its divestiture of the seven "Baby Bells," formed by merging the regional holding companies for AT&T's operating units.[53] AT&T lost almost two-thirds of its employees and more than two-thirds of its assets.[54]

The end of AT&T's national monopoly benefited American telephone customers immensely. Divestiture resulted in cost savings in excess of $100 billion in its first decade alone.[55] Telephone penetration rose from 91.4% of U.S. households before divestiture to 93.6 percent in 1991, a level where it would remain for most of the 1990s.[56] Meanwhile, long distance rates plummeted by nearly two-thirds in the first decade after the divestiture of the Baby Bells and the introduction of long-distance competition.[57]

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n.130 (2003) (noting that MCI received $37.8 million on remand (before trebling), and that this judgment was declared a victory for AT&T).

52. *See AT&T*, 552 F. Supp. at 140-41 (describing the settlement in which AT&T agreed to divest itself of twenty-two local service operating companies). The district court found that AT&T had "violated the antitrust laws in a number of ways over a lengthy period of time" thereby setting the stage for a consent decree that mandated divestiture of the Bell System. United States v. AT&T, 524 F. Supp. 1336, 1381 (1981). The court found that the government had adequately proven that AT&T had unreasonably and discriminatorily denied its long-distance competitors access to the Bell System local telephone network, among other anticompetitive acts and omissions. *See id.* at 1352-53, 1359 (finding that regardless of AT&T's compliance with the Communications Act of 1934, the company was still obligated under antitrust laws to allow competitors to interconnect with AT&T's local telephone network). This violated AT&T's duty, as the owner of "a 'strategic bottleneck'" in the telecommunications market, "to make access to that facility available to its competitors on fair and reasonable terms that do not disadvantage them." *Id.* at 1352-53.

53. Crandall, *supra* note 51, at 3 n.4; *see* FERGUSON, *supra* note 5, at 14-15 (noting that the new AT&T's businesses would be limited to competing in the long distance, telecommunications equipment, and electronics markets).

54. Clement G. Krouse et al., *The Bell System Divestiture/Deregulation and the Efficiency of the Operating Companies*, 42 J.L. & ECON. 61, 65 n.9 (1999). For a list of the twenty-two operating companies and seven regional holding companies by initial size (measured in access lines), refer to *id.* at 66, tbl. 1.

55. *Id.* at 64, 81.

56. FALLING THROUGH THE NET, *supra* note 22, at 2 (chart 1-2); Eli Noam, *Assessing the Impacts of Divestiture and Deregulation in Telecommunications*, 59 S. ECON. J. 438, 440 (1993).

57. *See* The Communications Act of 1994: Hearings Before the U.S. Senate Committee on Commerce, Science, and Transportation, 103d Cong. 58 (Feb. 23, 1994) (statement of Reed E. Hundt, FCC Chairman), *available at* http://www.fcc.gov/Speeches/Hundt/spreh402.txt (mentioning that the price of a ten minute phone call "from Chicago to Atlanta, expressed in 1993 dollars, was $6.28 in 1984; today that same call costs only $2.30").

Despite the breakup of AT&T's national monopoly, its heirs, the Baby Bells, continued to exercise strategic bottleneck control over the telecommunications industry, based on their ownership of the Bell System of local telephone monopolies.[58] Prior to the 1990s, state law generally granted the regional Bell system components "an exclusive franchise in exchange for some level of commitment to universal service."[59] Currently, the four large Baby Bell companies control almost seventy percent of the local telephone service market.[60] The Baby Bells typically do not compete in one another's markets;[61] instead, they coordinate their behavior closely on erecting defenses against potential competitors, in venues including political lobbying, regulatory proceedings, antitrust and other appellate litigation, pricing policies, joint ventures, and subsidizing favorable academic and policy research and advocacy.[62] For example, they have collaborated through the U.S. Telecom Association to advocate an "update" of the 1996 Act that would allow competing service

58. *See* United States v. AT&T, 524 F. Supp. 1336, 1352-53 (1981) (rejecting defendants AT&T and subsidiaries' motion to dismiss an antitrust suit brought by the U.S. government because they failed to allow competitors entry to local markets); Paul Joskow & Roger Noll, *The Bell Doctrine: Applications in Telecommunications, Electricity, and Other Network Industries*, 51 STAN. L. REV. 1249, 1264 (1999) (explaining that the breakup of AT&T gave the Baby Bells a "near monopoly inside" their respective "Local Areas and Transmission Area[s]" and also "created a relatively small number of points at which long distance carriers could connect to local access networks"); David Gabel, *Competition in a Network Industry: The Telephone Industry, 1894-1910*, 54 J. OF ECON. HIST. 543, 568-69 (Sept. 1994) ("'Local telephone exchanges are 'bottlenecks' under classical antitrust theory. The control of these franchises provides AT&T with the incentive and opportunity to protect, maintain, and extend its monopoly in telecommunications services overall.'") (quoting Plaintiff's First Statement of Contentions and Proofs at 70, United States v. AT&T, 524 F. Supp. 1336 (D.D.C. 1981) (No. 74-1698)). State and local law reinforced AT&T's monopoly by imposing franchise requirements on independent telephone companies, such as maximum rates, which did not apply to AT&T. *See id.* at 561-62 (stating because these regulations were not imposed on AT&T as well, they operated as a barrier to entry for firms wishing to compete in the market).

59. Worthy, *supra* note 44, at 10 n.27.

60. *See* TNS Telecoms, *Combined AT&T/Bellsouth Will Control 22% Consumer Telecom Spending, 34% Business Spending* (Mar. 13, 2006), http://www.tns telecoms.com/press-3-13-06.html (showing that Verizon accounts for twenty-five percent of local phone service market share, SBC twenty-three percent, BellSouth twelve percent, and Qwest eight percent).

61. *See id.* (indicating that eighty to ninety percent of local telephone customers claimed by Verizon, SBC, BellSouth, and Qwest are inside their respective service territories); FERGUSON, *supra* note 5, at 107 (noting that as of a few years ago, only 5,000 out of seventy million SBC customers lived "outside of [SBC's] operating area"); Thomas W. Hazlett, *Economic and Political Consequences of the 1996 Telecommunications Act*, 50 HASTINGS L.J. 1359, 1369 n.28 (1999) (noting that as of late 1990s there had been "very little entry and competition in local exchange markets") (citation and internal quotation marks omitted).

62. *See* FERGUSON, *supra* note 5, at 104, 112, 116-17 (relating the large extent to which the Baby Bells cooperate with each other and the fact that the conflict of interests that seemingly arise from these activities are largely not commented upon).

providers to be denied access to the telephone networks, just as the FCC has denied competing providers access to the cable networks.[63]

Prior to the 1990s, the cable industry obtained monopoly power in many local markets by negotiating with municipalities for exclusive franchise rights.[64] Owners of cable networks thereby obtained a "bottleneck monopoly" that constitutes "a physical and economic barrier" to competition.[65] In other words, "the physical connection between the television set and the cable network gives the cable operator bottleneck, or gatekeeper, control over most (if not all) of the [information] that is channeled into the subscriber's home."[66]

By 2000, only a small minority of cable subscribers lived in regions of effective competition where they could switch providers if they so desired.[67] Only about 3.7% of the around 34,000 "cable community units" in the United States had a choice between more than one multichannel video provider as of 2004, a condition referred to "effective competition" by the FCC.[68] On a nationwide basis, the top four U.S. multichannel video companies divide the majority of the

63. *See* Jeffrey H. Birnbaum, *No Neutral Ground in This Internet Battle*, WASH. POST, June 26, 2006, at D01 (describing collaboration between AT&T and BellSouth on print and television advertising supporting legislation permitting broadband providers to discriminate in pricing and service offered to different Web content providers); U.S. Telecom Ass'n, *The Future . . . Faster*, http://www.thefuturefaster.com/myth_everyone. aspx (last visited May 21, 2006) ("Local telecoms simply ask to compete according to the same rules already allowed for every last one of their cable, satellite and wireless competitors."); *USTA Publicity Campaign Seeks Legislative Jump Start*, TELECOM POLICY REPORT, Feb. 2, 2005, *available at* http://www.indarticles.com/p/articles/mi_m0PJR/is_4_3/ai_n9479829 (describing the telecommunications lobby's aggressive publicity campaign geared towards prompting new telecommunications reforms, including "The Future . . . Faster" website).

64. *See* Br. Amicus Curiae of the American Civil Liberties Union ("ACLU") and the Brennan Center for Justice at New York University School of Law in Support of Respondents, at 8, Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 125 S. Ct. 2688 (2005) (Nos. 04-277 & 04-281), http://cyberlaw.stanford.edu/about/cases/aclu-brandx.pdf ("Until 1992, the law permitted localities to award exclusive cable franchises, and many did. Today's large cable companies owe their dominance in the market to the earlier government-granted monopoly.") (citation omitted). Federal law currently defines a franchise as an authorization by a federal, state, or local governmental entity to construct or operate a cable system. 47 U.S.C. §§ 522(9), 522(10).

65. Time Warner Entm't Co. v. United States, 211 F.3d 1313, 1321 (D.C. Cir. 2000).

66. Turner Broad. Sys. v. FCC, 512 U.S. 622, 656 (1994).

67. *See* Donald L. Alexander, Mackinac Center for Public Policy, *Laying Cable and Competition* (May 15, 1999), http://www.mackinac.org/article.aspx?ID=1783 ("Nationwide, only 3% of 67 million cable subscribers can select from competing cable companies.").

68. FED. COMMC'NS COMM'N, IN THE MATTER OF ANNUAL ASSESSMENT OF THE STATUS OF COMPETITION IN THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING, ELEVENTH ANNUAL REPORT, 20 F.C.C.R. 2755, 2828 (2005) [hereinafter VIDEO COMPETITION REPORT].

market among themselves,[69] and only about fifteen percent of the market is not claimed by the top ten companies.[70] Rates for typical cable television packages have risen at several times the rate of inflation since the passage of the 1996 Act.[71]

B. From Dial-Up to Broadband Internet Access

Through 2003, most Americans accessed the Internet using narrowband "dial-up" services, which send and receive data over telephone lines at speeds of fifty-six kilobits per second ("Kbps") or less.[72] The FCC defines broadband to include Internet service with a transmission speed of 200 Kbps in at least one direction.[73] Residential broadband fitting this definition often operates via cable modems,[74] or by asymmetric digital subscriber line ("DSL" or "ADSL") technology, which transmits data over the telephone network.[75] Broadband at 200 Kbps permits the user to stream audio or video content, and click through and between Web pages roughly as fast as

69. *See id.* at 2763 (finding that "[i]n June 2003, the four largest operators served about 59 percent of all U.S. cable subscribers . . . in June 2004, the four largest cable operators served about 58 percent of . . . subscribers").

70. *Id.* at 2872-73 tbls. B-3 & B-4. The FCC defines "effective competition" as existing where consumers have a choice of more than one wireline cable television provider, or where direct broadcast satellite has a local penetration in excess of fifteen percent. *Id.* at 2828.

71. *See, e.g.*, Christopher Stern, *Pols Threaten to Sack Cable Over Rate Hikes*, VARIETY, Jan. 19-25, 1998, at 63-4 (reporting that cable rates had risen at four times rate of inflation from 1996 to 1998); Geraldine Fabrikant, *Little Outcry From Viewers As Rates Rise For Cable*, N.Y. TIMES, Nov. 24, 2003, at C1 (reporting that cable rates had risen at slightly more than three times the rate of inflation from 1997 to 2003); Ken Belson, *F.C.C. Sees Cable Savings in à la Carte*, N.Y. TIMES, Feb. 10, 2006, at C1 (reporting that "American households spent an average of $57.12 a month for pay television, an increase of 35.7 percent from 2000 . . . .").

72. *See* FERGUSON, *supra* note 5, at 3 (noting that two-thirds of homes "still depended upon modems," with the result that only about "20 percent of total U.S. homes . . . use faster Internet service").

73. U.S. GENERAL ACCOUNTING OFFICE (U.S. GAO), TECHNOLOGICAL AND REGULATORY FACTORS AFFECTING CONSUMER CHOICE OF INTERNET PROVIDERS, 4 n.1 (2000), *available at* http://www.usiia.org/news/gao.pdf. Residential broadband usually does not enable symmetric high-speed access, which would be equally fast whether uploading or downloading, but instead connects subscribers at a maximum of one or two megabits per second ("Mbps") downstream and only a tenth as fast upstream, less than 256 Kbps. *See* FERGUSON, *supra* note 5, at 33. Moreover, when the local network neighborhood becomes crowded, cable modem broadband access can slow to a crawl in both directions. *See* Johannes Bauer, Junghyun Kim, & Steven Wildman, *An Integrated Framework for Assessing Broadband Policy Options*, 2005 MICH. ST. L. REV. 21, 32 tbl. 2.

74. *See* A NATION ONLINE, *supra* note 18, fig. 3 (showing that 56.4% of broadband households used cable while 41.6% used DSL in 2003); Carlson, *supra* note 31, at 21 (noting that "many experts" consider "cable modem service" to be "the favored technology for broadband networks").

75. *See* FERGUSON, *supra* note 5, at 3.

leafing through the pages of a book, on a good day.[76] Unlike dial-up access, moreover, a broadband connection is "always on," so a user does not have to waste time reconnecting whenever the urge strikes to surf the Web or check e-mail.[77]

"True" broadband, in the minds of many commentators, would be Internet access at ten Mbps in both directions.[78] Unlike asymmetric cable and DSL, which operate at average speeds of only 128 Kbps upstream, and less than two Mbps downstream, true broadband would enable creating and hosting full-featured Web sites; sending large e-mail attachments such as photographs, audio files, or videos; using peer-to-peer file sharing networks; playing advanced video games; utilizing Internet telephony; and engaging in videoconferencing.[79] Most other networking technologies developed in competitive markets deliver symmetric connectivity, including modems, Wi-Fi, Ethernet-enabled local area networks, corporate intranets, and even DSL technologies other than the asymmetric version available to most homes and businesses.[80] The FCC's definition of broadband is insufficient for true broadband applications and archaic by international standards,[81] and deserves to

76. *See* FED. COMMC'NS COMM'N, INQUIRY CONCERNING THE DEPLOYMENT OF ADVANCED TELECOMMUNICATIONS CAPABILITY TO ALL AMERICANS IN A REASONABLE AND TIMELY FASHION, 14 F.C.C.R. 2398, 2406 (1999) [hereinafter HIGH-SPEED ACCESS INQUIRY 1999] (noting that broadband is defined as a bandwidth capable of supporting "a speed in excess of 200 kbps," and that 200 Kbps was chosen because it allows users "to change web pages as fast as one can flip through the pages of a book and to transmit full motion video").

77. *See* The Center for Democracy and Technology and the Broadband Access Project, *The Emerging Broadband Technologies: Overview and Background* 20 (2000), http://www.cdt.org/digi_infra/broadband/backgrounder.pdf (explaining that, unlike dial-up Internet service, a broadband user does not have to "initiate each connection through the modem, a process that can easily take more than a minute").

78. *See*, *e.g.*, David Molony, *Broadband: A Problem Without a Solution?*, TOTAL TELECOM, (Nov. 12, 2001), *available at* http://www.totaltele.com/interviews/display.asp? InterviewID=98 ("true" broadband would provide symmetrical access at 10 Mbps); Dan Gillmor, *Former FCC Chairman's Plan: Broadband in Every Home*, SAN JOSE MERCURY NEWS, July 9, 2003, at 1C (asserting that "true broadband" would require more than 10 Mbps); FERGUSON, *supra* note 5, at 33 (finding that delivering high-quality digital video, advanced graphics, and multimedia applications requires speeds over 10 Mbps).

79. FERGUSON, *supra* note 5, at 66, 143-44.

80. *See id.* at 77 (discussing the majority of the modem industry's choice to provide symmetric service and listing other, later networking technology industries that likewise decided to do so).

81. *See* FED. COMMC'NS COMM'N, AVAILABILITY OF ADVANCED TELECOMMUNICATIONS CAPABILITY IN THE UNITED STATES, FOURTH REPORT TO CONGRESS 5 (2004), *available at* http://www.fcc.gov/broadband/706.html (follow "Availability of Advanced Telecommunications Capability in the United States" hyperlink) [hereinafter FCC AVAILABILITY REPORT] (dissenting statement of Commissioner Michael J. Copps) (comparing the speeds of broadband service in Japan and Korea at 8,000 Kbps and 10,000 Kbps respectively with the FCC's definition of broadband service, which considers speeds as low as 200 Kbps "broadband").

be dropped in favor of better and more up-to-date measures of "true broadband" that will help policymakers gauge U.S. competitiveness.[82]

From the inception of the Internet, federal telecommunications law forced the telephone companies to open their lines to dial-up Internet Service Providers ("ISPs").[83] By the mid-1990s, providing home users with a connection to the Internet backbone was such an open and straightforward process that "technically literate teenager[s]" began to offer it, via Bulletin Board Systems and micro-ISPs.[84] This open system encouraged rapid adoption of the Internet by tens of millions of Americans subscribing to relatively low-cost ISPs,[85] of which there were 7,000 by the end of the 1990s.[86] America Online alone had thirty million subscribers in 2001, six times as many as in 1996.[87] Other ISPs such as Prodigy, CompuServe, the Microsoft

82. *See id.* (suggesting that the FCC study other countries' successful broadband strategies and consider how they may be applied in the United States).

83. *See* U.S. GAO, *supra* note 73, at 24 ("[T]he common carrier status of telephone companies, which requires that they provide nondiscriminatory service at just and reasonable rates, worked to give ISPs easy access to consumers through the telephone network."); Brief for ACLU et al. as Amici Curiae Supporting Petitioners, *supra* note 64, at 12 ("Because the FCC and state governments regulated telephone providers as common carriers, . . . thousands of ISPs [were] empowered to connect to their subscribers over regulated phone lines . . . ."); Francis Bar et al., *Defending the Internet Revolution in the Broadband Era: When Doing Nothing Is Doing Harm*, E-conomy Working Paper 12 (Aug. 1999), http://e-conomy.berkeley.edu/publications/wp/ewp12.html (arguing that growth of ISPs was made possible by FCC policies starting in the 1960s that "prevented telephone companies from dictating the architecture of data networks," and "forced open access to networks whose monopoly owners tried to keep closed").

84. Robert Crandall & Hal Singer, *Are Vertically Integrated DSL Providers Squeezing Unaffiliated ISPs (and Should We Care)?*, at 8 (2005), http://ssrn.com/abstract=710601 (follow Social Science Research Network "New York, USA" hyperlink to download document) (noting that the process requires only some software, a telephone number that can be dialed from a computer and a link to the Internet); *see* Andrew Leonard, *Geek Central*, SALON.COM, June 15, 1998, http://archive.salon.com/21st/feature/1998/06/15 feature.html (recounting a college senior's success in publishing and programming a website containing articles, tips and a discussion bulletin board).

85. *See* Telecommunications Reports International, *Number of Online Users in U.S. Reaches 70.7 Million, But Changes Loom*, TR'S ONLINE CENSUS (Aug. 8, 2001), http://www.tr.com/newsletters/rec/troc2q_pr.htm (measuring AOL's subscribers in 2001 at thirty million); Kara Swisher, *Sears to Sell Its Stake in Prodigy*, WASH. POST, Feb. 22, 1996, at D11 (stating that America Online had five million subscribers in 1996, while CompuServe had about four million, Prodigy two million, and Microsoft Network one million).

86. *See* U.S. GAO, *supra* note 73, at 29 (citing a study that found ninety-two percent of American consumers had the choice of seven or more ISPs in 1998, and noting that about 7,000 ISPs existed in the United States in 2000).

87. Telecommunications Reports International, *supra* note 85; Swisher, *supra* note 85, at D11. Many of these ISPs had originated in the 1980s as closed-architecture online services operating on a mainframe model. *See* FERGUSON, *supra* note 5, at 17-18.

Network, and Earthlink also had millions of subscribers.[88] Driven primarily by dial-up access through these and other, smaller ISPs, the number of U.S. residential Internet users grew one hundredfold from 1994 to 2004, from less than one million users in 1994 to over 150 million users in 2004.[89]

Despite the rapid proliferation of dial-up ISPs in the 1980s and early 1990s, residential customers did not have meaningful access to commercial broadband service until 1996.[90] The local telephone companies created by the breakup of the Bell system had the capability to offer broadband Internet in the 1980s, but did not offer it on a widespread basis until the late 1990s.[91] At a very early stage, a grassroots movement attempted to persuade state Public Utility Commissions to require the Baby Bells to offer broadband

88. *See* Ariana Eunjung Cha, *AOL 5.0 Unplugs Other Internet Providers*, WASH. POST, Dec. 24, 1999, at E01 (stating that, in 1996, CompuServe and MSN had 4.3 million and 1 million subscribers respectively, while, in 1999, Prodigy was the third largest provider with more than 2.2 million subscribers, surpassed only by Earthlink and AOL); David Kalish, *Two Firms Merge to Take on AOL: EarthLink Will Rank as Second-largest Web Access Provider*, OTTAWA CITIZEN, Sept. 24, 1999, at D4 (reporting the merger between Earthlink and MindSpring Enterprises, Inc., which increased Earthlink's subscribers to 3 million).

89. FERGUSON, *supra* note 5, at 86.

90. *See* HIGH-SPEED ACCESS INQUIRY 1999, *supra* note 76, at 2406 n.27 (finding that, although for years residential customers had the opportunity to subscribe to the same broadband services offered to medium and large businesses, these services were not designed for, marketed to or purchased by residential customers); Howard Shelanski, *Competition and Deployment of New Technology in U.S. Telecommunications*, 2000 U. CHI. LEGAL F. 85, at 111 (stating that it was not until the Telecommunications Act of 1996 opened the local telephone market to competition that carriers began offering DSL service as a consumer product on its own).

91. *See* Shelanski, *supra* note 90, at 115-16 (explaining that although DSL technology was available, it was not deployed until the 1990s, which could not be traced solely to low demand because even after demand rose, deployment lagged in areas covered by regional telephone monopolies); Dan Moffat, *Debunking DSL Myths*, TELEPHONY, Nov. 6, 2000 at 96, 102 (explaining that although DSL technology was invented around twenty years ago, it was not offered to customers because "high speed private line solutions" were still profitable for the "incumbent players" and customers had no access to alternative providers); *see also* Dhruv Khanna & Bruce Aitken, *The Public's Need for More Affordable Bandwidth: The Case for Immediate Regulatory Action*, 75 OR. L. REV. 347, 354-56 (1996) (arguing that local telephone service providers were not "meeting residential customers' significant and growing need for more telecommunications bandwidth at affordable rates"). Although the Baby Bells could have started providing DSL to consumers in the late 1980s, they delayed doing so, fearing that that it would "'negatively impact their other lines of business.'" DEBORAH A. LATHEN, BROADBAND TODAY 27 (Oct. 1999). Bell Labs, which had invented DSL technology around 1980, had commercialized it by 1990 as the basis of high-speed T-1 lines. *See* Moffat, *supra* note 91, at 102 (explaining that Bell Labs provided this inexpensive DSL service to business customers at high-margin prices for ten years). Residential "DSL started out slowly since many [Baby Bells] were reluctant to cannibalize their profitable T-1 service which offered high-speed connections at a very expensive price [i.e. $450 to $2,000 per month]." Reza Dibadj, *Toward Meaningful Cable Competition: Getting Beyond the Monopoly Morass*, 6 N.Y.U. J. LEG. & PUB. POL'Y 245, 273 (2003).

connections, but failed.[92] Only after the debut of cable modem service in their territories, starting in the mid-1990s, did the Baby Bells make DSL service available in communities where cable modem access had been offered, and at comparable prices.[93]

The Baby Bells, cable companies, and a variety of commentators have argued that the adoption of residential broadband since 1996 has been rapid, reflecting faster dissemination of a new communications technology than occurred with broadcast or cable television.[94] Such comparisons, however, are often rigged to ignore the long period between the invention of broadband in the 1970s or 1980s and its commercialization, which only picked up in the late 1990s.[95] The undue lag between the technological feasibility of residential broadband and its commercial availability may have artificially inflated the adoption rate for the technology during the late 1990s and early 2000s.[96] Moreover, the relatively low adoption rates for analog technologies such as television or VCRs may be an inappropriate comparison; a better yardstick may be the high adoption rates for digital technologies, such as dial-up Internet access, the World Wide Web, e-mail, and Wi-Fi, all of which spread faster than broadband.[97]

C. Natural Monopoly and Network Industry Characteristics of Broadband

The market for local access to broadband tends to be a "natural monopoly," at least in its stages of "growth," as compared to more

92. *See* Shelanski, *supra* note 90, at 111. One sign of this failure is that there were only a few hundred thousand DSL subscribers in the entire United States in 1999. LATHEN, *supra* note 91, at App.B, cht.2 (Oct. 1999).

93. *See* LATHEN, *supra* note 91, at 27 (noting that the Baby Bells only began offering DSL service once faced with losing potential customers to cable). Time Warner Cable began cable modem trials in California in 1996. Katie Hafner, *Living the Broadband Life*, N.Y. TIMES, July 15, 2004, at G1.

94. This claim buttresses the Baby Bells' deregulatory arguments that forcing the sharing of their networks with competitors, or allowing subsidies for municipal broadband, are unnecessary and probably harmful disruptions of a dynamic industry characterized by rapid growth and popularization. *See, e.g.*, *Industrial Competition and Consolidation: The Telecom Marketplace Nine Years After the Telecom Act: Oversight Hearing Before the H. Comm. on the Judiciary*, 109th Cong. 32 (2005) (statement of Michael Kellogg on behalf of U.S. Telecom Association) (arguing that U.S. broadband "penetration has increased at record rates" since FCC embraced deregulatory approach and abandoned broadband "unbundling" (or open access) policies).

95. *See* FERGUSON, *supra* note 5, at 141 (suggesting, instead, a comparison of adoption rates from the time of invention to the time of commercialization).

96. *See id.* ("[R]apid diffusion may be a response to pent-up demand and excessive delays in commercialization.").

97. *See id.* (explaining that because analog technologies improve at a slower rate than digital, a comparison of the two is inappropriate).

"matur[e]" markets.[98] In a natural monopoly, a single provider may satisfy consumer demand at lower average cost than two or more providers.[99] In a more mature market, a city or neighborhood may support two or more methods of accessing the Internet over broadband, such as DSL, cable, fiber optic lines, satellite, Wi-Fi, or broadband over power lines.[100] Nevertheless, large economies of scale in connecting the "last mile" of wires to subscribers favor monopolists over new entrants, who must incur exorbitant fixed costs in order to challenge incumbent providers.[101] Thus, the marginal and average total costs of delivering broadband to the millionth user of an existing broadband network will tend to be much lower than to the tenth user to a newly constructed network.[102]

Broadband is also an industry characterized by network effects, and is therefore frequently described as a "network industry."[103] Network effects characterize the broadband industry because the value of a broadband Internet connection increases dramatically as more Internet users have broadband, and as content providers make high-

98. Gerald Faulhaber & Christiaan Hogendorn, *The Market Structure of Broadband Telecommunications*, 48 J. OF INDUS. ECON. 305, 323 (2000).

99. Richard Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 548 (1969); Neil Hamilton & Anne Caulfield, *The Defense of Natural Monopoly in Sherman Act Monopolization Cases*, 33 DEPAUL L. REV. 465, 465 (1984); Lemley & McGowan, *supra* note 41, at 484. Industries characterized by natural monopoly are often subject to economies of scale that are proportional or at least tied to the extent of consumer demand. *See* Joskow & Noll, *supra* note 58, at 1251 (providing examples of natural monopoly industries whose economies reflect consumer demand, such as local distribution networks in electricity, telephone and gas service).

100. *See* HIGH-SPEED ACCESS INQUIRY 1999, *supra* note 76, at 2423-24; Kathleen Q. Abernathy, Extending Broadband to all Americans (Jan. 13, 2005), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-256079A1.pdf (encouraging the deregulation and development of cable wireline networks, wireless networks and satellite broadband providers).

101. *See* Lemley & McGowan, *supra* note 41, at 546-49 (finding that the telephone industry's natural monopoly characteristics prevented new networks from competing, and regulation did little to ameliorate the situation); Aronowitz, *supra* note 30, at 890-91 (explaining that the costs associated with developing a telecommunications network render the creation of several competing networks inefficient).

102. *See* Dennis Carlton & J. Mark Klamer, *The Need for Coordination Among Firms, With Special Reference to Network Industries*, 50 U. CHI. L. REV. 446, 451 (1983) (explaining that creating a new network involves large initial costs, whereas using an existing network continuously decreases marginal costs); Lemley & McGowan, *supra* note 41, at 484 (finding that in a natural monopoly, the marginal and average costs of production decline as the demand increases in a given market).

103. *See, e.g.*, Robert Crandall, *Broadband Communications*, 2 THE HANDBOOK OF TELECOMMUNICATIONS ECONOMICS (Martin Cave et al. eds., 2003); CPB NETHERLANDS BUREAU FOR ECONOMIC POLICY ANALYSIS, DO MARKET FAILURES HAMPER THE PERSPECTIVES OF BROADBAND? (Dec. 2005), *available at* http://www.cpb.nl/nl/pub/cpbreeksen/document/102/doc102.pdf. (finding that broadband shares characteristics typical of networks, including "network infrastructure, essential facility and economies of scale").

bandwidth multimedia files and applications available.[104] For broadband, as for other "markets with network effects, the incumbent's large installed base makes it difficult for new entrants to dislodge the incumbent."[105]

Networks regulated solely by private property rights tend towards monopoly exploitation due to the "network effects" inherent in selling access to telecommunications facilities.[106] Access to the network is valuable in proportion to the number of devices hooked up to it, such as telephones or Internet-ready computers, so a new network with few subscribers may struggle to attract the "critical mass" it needs to compete.[107] Small upstart networks, as a consequence of "network externalities," or benefits accruing to existing or potential subscribers from the connecting of a new subscriber to a network, may not always be able to challenge dominant networks effectively.[108] Dominant firms in network

104. *Cf.* William Kolasky, *Network Effects: A Contrarian View*, 7 GEO. MASON L. REV. 577, 579 (1999) ("As defined in the economics literature, network effects exist . . . when a product becomes more valuable as greater numbers of customers use it. The most obvious examples are communications networks, where the value to each customer increases exponentially the more 'friends and family' are on the same network."); A. Douglas Melamed, *Network Industries and Antitrust*, 23 HARV. J.L. & PUB. POL'Y 147, 148 (1999) ("the defining characteristic . . . of network industries is that they involve products that are more valuable to purchasers or consumers to the extent that those products are widely used. This phenomenon is known as a 'network effect' or 'demand-side economy of scale'"); Lemley & McGowan, *supra* note 41, at 484 ("network effects are demand-side rather than supply-side effects: the shape of the demand curve is affected by existing demand").

105. Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation* (Sept. 20, 2005), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=812991 (follow Social Science Research Network "New York, USA" hyperlink to download document).

106. *See* Aronowitz, *supra* note 30, at 890-91 ("Creating multiple physical last mile connections for DSL or cable modem service would be . . . inefficient . . . . Thus, the first company to install the last mile enjoys a natural monopoly over the connection that makes the open access question particularly pressing."); *see also* Carl Shapiro, Antitrust In Network Industries (Jan. 25, 1996), http://www.usdoj.gov/atr/public/speeches/0593.htm ("[O]nce achieved, the network effects that helped create dominance may make it more difficult for new entrants to dislodge the market leader than in other industries lacking network characteristics."); Kolasky, *supra* note 104, at 579, 583 (warning that enforcement agencies in both the United States and Europe have become increasingly vigilant in monitoring network effects).

107. Carl Shapiro, *Exclusivity in Network Industries*, 7 GEO. MASON L. REV. 673, 675 (1999); *see* Aronowitz, *supra* note 30, at 890-91 (explaining that the costs associated with wiring the "last mile" discourage competing networks from entering the market); Lemley & McGowan, *supra* note 41, at 546 (noting that a network monopoly may be more efficient that competition due to cost advantages of dense networks, and bandwagon effects of compatibility and interconnection).

108. *See* Michael Kende, *The Digital Handshake: Connecting Internet Backbones* 3, 22-23 (Sept. 2000), http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp32.pdf (suggesting also that dominant networks may refuse to connect their subscribers with those of the smaller networks, "squeeze" prices or engage in non-price

industries also deploy a host of predatory tactics to suppress new entry, such as mergers and acquisitions, refusals to provide access, exclusive dealing, monopoly leveraging, contrived incompatibility, preemptive announcements of new services or pricing, lawsuits based on invalid patents or trademarks, multi-product bundling, and below-cost pricing to win standards wars.[109]

Both the cable and the telephone networks are characterized by local monopolies, which carry over into broadband.[110] The local telephone and residential cable networks are natural monopolies in the sense that competing with the dominant firms typically requires building additional wiring and infrastructure, which would be wasteful and duplicative in many, if not most, local markets.[111] Fixed

discrimination by, for example, degrading interconnections with those other networks).

109. *See* Shapiro 1996, *supra* note 107 (stating that, although some of these tactics may be legitimate for firms with small shares in the market, use of same tactics by incumbent firms may be anticompetitive, by closing networks to upstart firms); Daniel Rubinfeld, *Competition, Innovation, and Antitrust Enforcement In Dynamic Network Industries* 4, 12 (Mar. 24, 1998), *available at* http://www.usdoj.gov/atr/public/speeches/1611.htm.

For example, the U.S. government has charged Verizon, the nation's dominant Baby Bell prior to the merger of SBC and AT&T in 2006, with a variety of anticompetitive tactics, including merging with Bell Atlantic, GTE, and now MCI in order to reduce competition in local telephone and Internet service markets. Private parties have complained of Verizon's refusals to deal, contrived incompatibility with competing service providers, and bundling of DSL service with telephone service. *See, e.g.*, United States v. Verizon Commc'ns, Inc., No. 1:05CV02103 (D.D.C. complaint filed Oct. 27, 2005) (examining Verizon's acquisition of MCI); Law Offices of Curtis V. Trinko, L.L.P. v. Bell Atl. Corp., 305 F.3d 89, 107-08 (2d Cir. 2002), *rev'd sub nom.* Verizon Commc'ns., Inc. v. Law Offices of Curtis V. Trinko, L.L.P., 540 U.S. 398 (2004) (examining refusals to deal with competing telephone service provider and monopoly leveraging); Twombly v. Bell Atl., 425 F.3d 99, 104 (2d Cir. 2005) (examining refusals to deal with competing Internet service providers); Greco v. Verizon Commc'ns, Inc., 2005 U.S. Dist. LEXIS 4434, at *3-6 (S.D.N.Y. Mar. 17, 2005) (examining bundling). Plaintiffs have also charged Bell Atlantic, another large Baby Bell, with refusals to deal, contrived incompatibility, predatory pricing and price "squeezing," falsely pre-announcing DSL service availability, and bringing bad faith patent litigation. *See* Covad Commc'ns Co. v. Bell Atl. Corp., 407 F.3d 1220, 1222 (D.C. Cir. 2005) (examining refusal to deal, price squeezing and patent litigation).

110. *See* FERGUSON, *supra* note 5, at 146, 59 (noting that the telephone and cable markets compete only in providing certain services, such as low-speed residential broadband and asymmetric services, and that the two industries are quite similar in certain aspects, including their inability to provide effective competition).

111. *See, e.g.*, Verizon Commc'ns, Inc. v. Fed. Commc'ns Comm'n, 535 U.S. 467, 475-76 (2002) (noting that "persistently monopolistic local [telephone] markets" have long been regarded as "the root of natural monopoly in the telecommunications industry"); AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 412-16 (1999) (Breyer, J., concurring in part and dissenting in part) (explaining that the Telecommunications Act of 1996 "recognizes that actual local [telephone] competition might not prove practical" because such competition could result in "wasteful duplication of resources"); United States v. W. Elec. Co., 673 F. Supp. 525, 537-38 (D.D.C. 1987), *aff'd in part, rev'd in part*, 900 F.2d 283 (D.C. Cir. 1990) (finding that the "natural monopoly" characteristics of local telephone networks

costs associated with network development and installation are relatively high, while the marginal and average total costs reflecting the burden of adding more users are relatively low.[112] High barriers to entry in the cable and telephone industries prevent potential competitors from undercutting high prices in many instances.[113] The cable and telephone companies have built large networks under the protection of exclusive government franchises, "and therefore have first-mover advantages and scope economies not available to other new entrants . . . ."[114] Other barriers to entry in the telephone market, which most likely affect the cable market as well, include

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mean that duplication of them "would require an enormous and prohibitive capital investment"); Omega Satellite Prods. Co. v. City of Indianapolis, 694 F.2d 119, 126 (7th Cir. 1982) (Posner, J.) (finding that cable television may be a natural monopoly because "[t]he cost of the cable grid appears to be . . . largely invariant to the number of subscribers the system has," so that "the average cost of cable television would be minimized by having a single company in any given geographical area"); James Speta, *Deregulating Telecommunications in Internet Time*, 61 WASH. & LEE L. REV. 1063, 1089 (2004) ("Cable television service, like local telephony, has long been considered a natural monopoly service. Fixed costs are high; multiple wires to the home risks stranded investment; economies of both scale and density apply."); Aditya Bamzai, Comment, *The Wasteful Duplication Thesis in Natural Monopoly Regulation*, 71 U. CHI. L. REV. 1525, 1530-32 (2004) (stating that a "natural" monopoly may exist where two providers serving same local area would require duplicative wiring, instruments, and billing) (citing 2 ALFRED KAHN, THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS 123 (1971)).

112. *See, e.g.*, Omega Satellite Prods., 694 F.2d at 126 (noting that the cost of installing cable grid is greater than the cost of adding more users); Bamzai, *supra* note 111, at 1528-29 (arguing that in the telecommunications industry, "large fixed expenses" result in "declining average costs" as number of users increases).

113. *See, e.g.*, United States Telecom Ass'n v. Fed. Commc'ns Comm'n, 359 F.3d 554, 572 (D.C. Cir. 2004) (discussing substantial barriers to entry into local telephone service identified by FCC, such as sunk costs and ILEC absolute cost advantages); FED. COMMC'NS COMM'N, ANNUAL ASSESSMENT OF THE STATUS OF COMPETITION IN MARKETS FOR THE DELIVERY OF VIDEO PROGRAMMING, FOURTH ANNUAL REPORT, 13 F.C.C.R. 1034, 1043 (1998) ("Local markets for the delivery of . . . [cable television] programming generally remain highly concentrated and . . . characterized by some barriers to entry . . . .").

114. FED. COMMC'NS COMM'N, REPORT AND ORDER ON REMAND AND FURTHER NOTICE OF PROPOSED RULEMAKING, REVIEW OF THE SECTION 251 UNBUNDLING OBLIGATIONS OF INCUMBENT LOCAL EXCHANGE CARRIERS, 18 F.C.C.R. 16978, 17046 (2003) [hereinafter SECTION 251 ORDER] (referring to cable industry); *see id.* at 17028-41 (making similar findings regarding barriers to entry into local telephone industry); Turner Broad. Sys. v. Fed. Commc'ns Comm'n, 512 U.S. 622, 634 (1994) (The U.S. "cable industry is characterized by horizontal concentration, with many cable operators sharing common ownership," which has "resulted in greater 'barriers to entry for new programmers'") (quoting Cable Television Consumer Protection and Competition Act of 1992, § 2(a)(4), Pub. L. No. 102-385, 106 Stat. 1460); U.S. Telecom Ass'n, 359 F.3d at 572 (listing barriers to entry into local telephone industry, including "sunk costs," incumbent telephone company "cost advantages," "first-mover advantages," and "operational barriers to entry" controlled by incumbent telephone companies); FMEA, *supra* note 3, at 11 (explaining that state and local governments created monopolies in telephone and cable television industry by granting "exclusive franchises . . . to serve a particular geographic area," which protected private companies like BellSouth or Comcast from competition while they built "large networks with economies of scale and scope").

"bottlenecks, entrenched customer preferences, the regulatory process, large capital requirements, access to technical information, and disparities in risk."[115]

D. The Lack of Effective Competition in Many Broadband Markets

Consumers' options in selecting high-speed Internet service have been very limited until recently. Some commentators describe the broadband market as a "cable-phone duopoly."[116] By 2004, the fFCC reported that close to forty percent of all U.S. zip codes either had monopoly or duopoly broadband access, or none at all.[117] "Thus, nearly half of all consumers lack meaningful choice in broadband providers."[118] For the rest, a single DSL provider is typically the only effective competition to the dominant local cable provider in the market for residential broadband access.[119] These estimates actually overstate the extent of competition, because the FCC requires only that an entity has one subscriber in an entire zip code to be counted as a provider throughout that area.[120] In fact, when consumers were polled in 2004 regarding the availability of broadband in their area, nearly a tenth reported that it was not available in their area at all,

115. United States v. AT&T, 524 F. Supp. 1336, 1348 (D.D.C. 1981).

116. Rob Pegoraro, *Broadband Is Too Important to Be Left to Cable-Phone Duopoly*, WASH. POST, Aug. 14, 2005, at F07; *see also* Mike Langberg, *S.F. Wifi Proposal Out on a Tech Limb*, SAN JOSE MERCURY NEWS, Aug. 19, 2005, at 1D, *available at* http://www.siliconvalley.com/mld/siliconvalley/business/columnists/mike_langberg/12425371.htm (discussing the "broadband duopoly" and various cities' plans to award bidding companies the sole or shared right to build such a citywide network, providing Internet access to homes).

117. FED. COMMC'NS COMM'N, INDUSTRY ANALYSIS AND TECHNOLOGY DIVISION, WIRELESS COMPETITION BUREAU, FEDERAL COMMUNICATIONS COMMISSION RELEASES DATA ON HIGH-SPEED SERVICES FOR INTERNET ACCESS, tbl.12 (June 2004), http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0604.pdf (finding that in 2003 14.9% of zip codes had one provider, 17.1% had two providers and 6.8% had none at all).

118. Network Neutrality: Hearings Before the U.S. Senate Committee on Commerce, Science, and Transportation, 109th Cong., 2d Sess. (2006), 2006 WL 282062 (statement of Vint Cerf, Vice President and Chief Internet Evangelist, Google Inc.), http://commerce. senate.gov/pdf/cerf-020706.pdf.

119. *See* FERGUSON, *supra* note 5, at 132, 136 (asserting that the residential broadband market is a duopoly between local telephone and cable monopolies); *see also* Bruce Fein, *Choking Broadband Competition*, BROAD. & CABLE, Mar. 28, 2005, at 74 (explaining that in many places, where cable and DSL are the only options, broadband access is costly and of a low quality due to the incumbents' stronghold on the market).

120. *See* Michael J. Copps, Commissioner, Fed. Commc'ns Comm'n, RE: Aug. 6, 2003 Wireline Competition Bureau Report on the Growth of Subscribership to High-Speed Service During the Last Three Years (Aug. 6, 2003), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-237388A3.pdf ("Finding one high-speed subscriber in a zip code and counting it as service available throughout is not a credible way to proceed.").

and one in six said that only one monopoly broadband provider served their area.[121]

The market for local broadband service is extraordinarily concentrated by economic measures,[122] and is in need of substantial reform to become fully competitive.[123] In 2005, the top six providers claimed ninety percent of cable broadband subscribers, while the top four DSL providers claimed nearly ninety percent of DSL subscribers.[124] Using the economic methodology employed by the U.S. Department of Justice (i.e., the Herfindahl-Hirschman Index or "HHI"),[125] the local broadband sector is "highly concentrated."[126] In fact, the typical local broadband market has an HHI concentration level of 5,000,[127] three times what the Department of Justice considers to be highly concentrated.[128] Judged by its HHI, local broadband was five times as concentrated in 2001 as the print media, radio and television broadcasting, or film production and distribution,[129] and

121. PEW INTERNET PROJECT, BROADBAND PENETRATION ON THE UPSWING: 55% OF ADULT INTERNET USERS HAVE BROADBAND AT HOME OR WORK 6 (Apr. 19, 2004), http://www.pewInternet.org/PPF/r/121/report_display.asp (follow "View PDF of Report" hyperlink).

122. *See* FED. COMMC'NS COMM'N, PROVISION OF FIXED AND MOBILE BROADBAND ACCESS, EDUCATIONAL AND OTHER ADVANCED SERVICES IN THE 2150-2162 AND 2500-2690 MHZ BANDS ET AL., 18 F.C.C.R. 6722, 6775 (2003) (asserting that, with a HHI of between approximately 5000 and 5400, the "typical broadband Internet market is very highly concentrated").

123. *See* Pegoraro, *supra* note 116, at F07 (suggesting that the FCC encourage true competition by creating more meaningful regulations, better enforcing its current regulations and easing the way for progress in other forms of broadband).

124. Leichtmann Research Group, *Over 40 Million Subscribe to Broadband Internet in the U.S.* (Nov. 14, 2005), http://www.leichtmanresearch.com/press/111405 release. html (reporting that Comcast, Time Warner, Cox, Charter, Adelphia, and Cablevision claim twenty-one out of twenty-three million cable broadband subscribers, while SBC, Verizon, Bell South, and Qwest claim fifteen out of seventeen million DSL broadband subscribers).

125. An industry's HHI is derived by adding up the squares of each nontrivial industry participant's market share. U.S. Department of Justice & Federal Trade Commission, Horizontal Merger Guidelines § 1.5 (Apr. 2, 1992), http://www.usdoj. gov/atr/public/guidelines/horiz_book/15.html.

126. The Department of Justice considers an industry with an HHI in excess of 1,800 to be "highly concentrated." *Id.*; *see also* Application of Echostar Communications Corp., 17 F.C.C.R. 20559, 20614 (2002) (asserting that where a post-merger HHI exceeds 1800 and the HHI increases by more than 100 points, the merger will likely enhance the firm's market power).

127. *See* Harvey Reiter, *The Contrasting Policies of the FCC and FERC Regarding the Importance of Open Transmission Networks in Downstream Competitive Markets*, 57 FED. COMM. L.J. 243, 291-92 (2005) (basing this analysis on a residential and small business market consisting of the ILEC provider, one non-ILEC provider, and one cable provider, the HHI is 5200).

128. *Id.* at 292.

129. Eli Noam, *The Internet: Still Wide Open and Competitive?*, at 3-6 (Sept. 2003), http://tprc.org/papers/2003/200/noam_TPRC2003.pdf.

more than twice as concentrated as new media, such as home video and cable television, or the Internet industry.[130]

Broadband is much less competitive than the non-broadband Internet sector, which many small start-up ISPs entered with relative ease.[131] For every 100,000 users of the dial-up Internet, there were fewer than two broadband providers as of 2002, compared to about fifteen dial-up ISPs.[132] Many consumers have only one broadband choice to make: between a single DSL and a single cable broadband provider.[133] Cable providers accounted for two-thirds of broadband households in 2001, a lead that narrowed to fifty-six percent of households in 2003.[134]

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130. *Id.* at 6. The Internet industry is here defined to include the Internet backbone, Internet service providers, Web browsers and media players, and Internet search engines and Web portals. *See id.* at 2 (listing the "infrastructure components underlying the Internet's basic functioning").

131. *See id.* at 9 (demonstrating that the top ten companies' revenue made up about sixty-five percent of the Internet industry's total revenue in 2001/2002). Over ninety-two percent of Americans "had access by a short local phone call to seven or more ISPs by 1998." Shane Greenstein, *Commercialization of the Internet*, in 1 INNOVATION, POLICY AND THE ECONOMY 165 (Adam Jaffe et al. eds., 2001). Even rural Internet users could select from among at least four to seven ISPs on average by the late 1990s, while urban users could select from among literally hundreds of providers. *See* Karen Charman, *Recasting the Web: Information Commons to Cash Cow*, EXTRA!, Aug. 26, 2002, at 22, 24, *available at* http://www.alternet.org/story/13929 (quoting CEO of Earthlink) (stating that Internet users in small towns and rural areas can select from at least four ISPs, whereas users in cities can choose from hundreds); *Broadband: Competition and Consumer Choice in High Speed Internet Services and Technologies: Hearing Before the Sen. Comm. on the Judiciary*, 106th Cong. 31-38 (July 14, 1999) (statement of Bill Schrader, Chairman & Chief Executive Officer, PSINet Inc.) ("[A]pproximately [ninety-six] percent of Americans today have a choice of at least four ISP's within their local calling area.").

132. CONSUMER FEDERATION OF AMERICA, THE IMPORTANCE OF ISPS IN THE GROWTH OF THE COMMERCIAL INTERNET 28 (2002), http://www.consumerfed.org/pdfs/isp study070102 .pdf.

133. S. DEREK TURNER, BROADBAND REALITY CHECK: THE FCC IGNORES AMERICA'S DIGITAL DIVIDE 15 (Aug. 2005), *available at* http://www.hearusnow.org/fileadmin/ sitecontent/broadband_report_optimized.pdf.

134. A NATION ONLINE, *supra* note 18, at Executive Summary; *see* U.S. Telecom Ass'n v. Fed. Commc'ns Comm'n, 359 F.3d 554, 585 (finding, in 2004, that cable companies provided nearly sixty percent of all high-speed lines). Cable has heretofore enjoyed several advantages over DSL in the United States, including coaxial cable's superior bandwidth capacity and greater range than DSL, which is tied to central telephone switching office. *See* Dibadj, *supra* note 91, at 272-74 (explaining the technological constraints of DSL); Tongue, *supra* note 31, at 1104 (noting that the performance of DSL transmissions decreases as the customer's distance from the central office grows and that DSL quality varies with the condition of the copper wires and the quality of the other equipment). In addition, between 1996 and 2004, the cable industry spent about $95 billion, or $1,300 per customer, in rebuilding its infrastructure to provide digital channels, telephone, broadband, and on-demand services. The amount spent specifically on broadband, however, is usually not broken out, precluding a focused examination of returns on broadband investments to date. *See* NAT'L CABLE & TELECOMMS. ASS'N, THE VIDEO MARKET IS FULLY COMPETITIVE: ALMOST 26 MILLION CONSUMERS NOW SUBSCRIBE TO CABLE'S COMPETITORS 5 (July 2004), http://www.heartland.org/pdf/16369.pdf; U.S. GEN.

Unlike other Internet and broadband providers such as AOL or Covad, which generally compete with one another by offering broadband on a national basis, the Baby Bells and the cable companies generally compete only in their specific local service areas.[135] The Baby Bells typically offer broadband Internet service "only within their geographical monopoly telephone service areas."[136] Cable providers resemble the Baby Bells in exercising "geographical monopoly control over a local distribution bottleneck," and in making slow progress in offering high-speed Internet access on a nationwide basis or at prices most consumers can afford.[137] The cable companies have resisted matching reduced introductory prices (i.e. about $15 per month) for slower broadband service offered by Baby Bells such as Verizon and SBC Communications (now AT&T again[138]), even though broadband is bundled with cable television and/or telephone service, as Verizon and SBC/AT&T have bundled broadband with local and long-distance telephone service.[139] Now it appears that these same Baby Bells may recoup their foregone subscriber fees by charging Internet service providers such as Google for the privilege of being accessible to DSL subscribers, prompting fears of pervasive censorship and a pay-to-play Internet.[140]

ACCOUNTING OFFICE, ISSUES RELATED TO COMPETITION AND SUBSCRIBER RATES IN THE CABLE TELEVISION INDUSTRY 4, 25 (Oct. 2003), http://www.gao.gov/new.items/d048.pdf (noting that programming and upgrading costs incurred by cable companies have increased on average by thirty-four percent, with the cable industry having spent over $75 billion between 1996 and 2002).

135. The only national residential broadband network is owned by Covad, which is neither a Baby Bell nor a cable company. *See* Covad, *Covad Public Policy* (2005), http://www.covad.com/companyinfo/publicpolicy/index.shtml.

136. FERGUSON, *supra* note 5, at 108 (emphasis omitted).

137. *Id.* at 146.

138. *See SBC-AT&T Merger Costs Trigger $866M Charge*, SAN FRANCISCO BUSINESS TIMES, Jan. 26, 2006, *available at* http://sanfrancisco.bizjournals.com/sanfrancisco/stories/ 2006/01/23/daily51.html (reporting the SBC-AT&T merger).

139. Jessica Marmor, *Telecom*, WALL STREET JOURNAL ONLINE (Feb. 28, 2006), http://online.wsj.com/article/SB114107868866084626-search.html?KEYWORDS=broadband&COLLECTION=wsjie/6month; Marguerite Reardon, *Bells Slash Prices to Lure Broadband Customers*, CNET NEWS.COM, Aug. 23, 2005, http://news.com.com/Bells+slash+prices+to+lure+broadband+customers/2100-1034_3-5842279.html (reasoning that cable companies have resisted lowering their prices, instead focusing on providing better speeds, usability, and reliability).

140. *See* Glenn Fleishmann, *Advocates of Wi-Fi in Cities Learn Art of Politics*, N.Y. TIMES, Jan. 19, 2006, at C1 (explaining that in response to a suggested "pay-to-play" plan, advocates and community groups complained to state politicians); Associated Press, *Intel Joins Group In Favor of Internet Legislation*, SAN JOSE MERCURY NEWS, Apr. 26, 2006, *available at* http://www.mercurynews.com/mld/mercurynews/news/local/states/california/northern_california/14435374.htm (describing Intel's appeal to Congress to pass legislation that ensures that the Internet will remain "open and neutral").

Lack of competition in the price of high-speed Internet service has been a significant problem. Monthly fees averaged $50 in many areas on a consistent basis from 1998 to 2003 for service at one to two Mbps downstream and much less than that upstream.[141] This price stability presented a stark contrast to the much more rapidly increasing quality and plummeting prices of computers and other digital technologies during the same period.[142] With cable in control of nearly seventy percent of the broadband industry, there was "no real competition" in most local markets during that period, according to a spokesperson for a large Baby Bell, SBC.[143] The bursting of the telecommunications bubble starting in 2000 further entrenched many dominant broadband providers by destroying many telecommunications companies, wiping out $2 trillion of stock market value,[144] and enabling the Baby Bells to slash investment in infrastructure in favor of exploiting their existing networks as long as possible.[145]

The divergence in the pace of price cuts and new innovations between broadband and other digital technologies may be due to mixed incentives facing diversified broadband providers. Robust

141. *See* FERGUSON, *supra* note 5, at 67-68, 141 (stating that in 1998, ADSL prices decreased to a range from thirty dollars per month in some regions to fifty dollars in the majority of areas, where they remained until 2003). *But cf.* Scott J. Savage & Donald M. Waldman, *United States Demand for Internet Access,* 3 REV. OF NETWORK ECON. 228, 229, 236 (2004) (reporting that a nationwide survey of residences conducted during 2003 found mean prices for cable and DSL broadband to be $37.70 and $43.92, respectively). As of 2005, the price of cable and DSL broadband continued to hover near $50 per month once the costs of subscribing to tied services such as cable television or wireline telephone service were included. Gene Kimmelman, *Statement on Behalf of Consumers Union and the Consumer Federation of America on SBC-AT&T and Verizon-MCI Mergers Remaking the Telecommunications Industry*, 13 COMMLAW CONSPECTUS 1, 2 & n.4 (2005) (explaining that although cable broadband costs about $ 45 per month, and DSL broadband about $30 per month, most providers also require consumers to "buy extra services–DSL tied to local phone service, or cable modem service tied to a cable video package. In order to get the benefits of this 'bundle-only' competition, the average household must double or triple its spending.").

142. *See* FERGUSON, *supra* note 5, at 141 (comparing the pace of DSL deployment to the pace of deployment of other digital technologies, such as dial-up access, the Web, and Wi-Fi).

143. Tom Mainelli, *DSL Service Falters as Providers Crumble*, PC WORLD, Aug. 15, 2001, *available at* http://pcworld.about.com/news/Aug152001id58344.htm (claiming that DSL providers are allies against cable).

144. *See* Michael Powell, Speech at the Goldman Sachs Communicopia XI Conference (Oct. 2, 2002), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-226929A1.pdf (explaining that the telecommunications industry is suffering from not only financial loss but also nearly 500,000 lost jobs, corporate scandals and, in some markets, hyper-competition).

145. *See* FMEA, *supra* note 3, at 8, 10 (citing BellSouth and Verizon, who both reduced their investment spending by thirty-nine percent, or $9.5 billion, from 2000 to 2003); *see also* FERGUSON, *supra* note 5, at 58-59 (stating that Baby Bells "reduced network capital investment sharply between 2001 and 2003").

competition from the Internet threatens to destroy the cable and telephone companies' revenue base as Internet telephony captures the voice communication market, and as webcasting and digital delivery of entertainment content render cable television less necessary.[146] Conscious of this threat, most Baby Bells have heretofore refused to sell DSL to customers who do not also purchase local telephone service, giving rise to allegations of anticompetitive product tying, in violation of antitrust law.[147] Verizon's wireless broadband service is only available to a third of Americans, at $60 per month for a two-year commitment plus a "qualifying voice plan."[148] Moreover, Baby Bells such as SBC/AT&T have indicated that they may refuse to connect DSL subscribers to their choice of Internet telephony services.[149] For their part, cable broadband providers have sought to shield their multichannel video businesses from Internet competition by prohibiting their subscribers from downloading excessive multimedia content or utilizing interactive video game servers, among other high-bandwidth activities.[150]

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146. *See* FERGUSON, *supra* note 5, at 27 (predicting that a competitive broadband industry would advance the merging of cellular, broadcasting, and data delivery services with Internet services).

147. *See* Greco v. Verizon Commc'ns, Inc., 2005 U.S. Dist. LEXIS 4434, at *12-15 (S.D.N.Y. Mar 22, 2005) (explaining that Verizon admitted refusing to sell "stand-alone DSL service" in most markets, offering it only as part of a limited technical trial in some states for a period of only eight months); Z-TEL Commc'ns, Inc. v. SBC Commc'ns, Inc., 331 F. Supp. 2d 513, 543-48 (E.D. Tex. 2004) (denying motion to dismiss claim that SBC Communications unlawfully tied DSL service to local telephone service); Levine v. Bellsouth Corp., 302 F. Supp. 2d 1358, 1371 (S.D. Fla. 2004) (noting that Bellsouth "has never offered" DSL "on a standalone basis"); BellSouth Telecommunications, Inc. v. Cinergy Commc'ns Co., 297 F. Supp. 2d 946, 954 (E.D. Ky. 2003) (finding "substantial evidence" to support the Kentucky Public Service Commission's conclusion that BellSouth had a "practice of tying its DSL service to its own voice service to increase its already considerable market power in the voice market has a chilling effect on competition and limits the prerogative of Kentucky customers to choose their own telecommunications carriers"); Covad Commc'ns Co. v. Pac. Bell, No. C 98-1887 SI, 2000 U.S. Dist. LEXIS 21267, *12-*15 (N.D. Cal. May 8, 2000) (reaffirming dismissal of antitrust challenge to Pacific Bell's alleged practice of tying DSL data service to voice line service); Alex Salkever, *Will Naked DSL Chill the Cable Guys?*, BUS. WK. ONLINE, Feb. 27, 2004, http://www.businessweek.com/technology/content/feb2004/tc20040227_8296_tc047.htm (describing how Baby Bells have insulated their businesses from profit volatility by declining to offer customers DSL without bundled local telephone service).

148. Verizon Wireless BroadbandAccess Service Overview, http://www.verizonwireless.com/b2c/mobileoptions/broadband/serviceoverview.jsp (last visited May 26, 2006).

149. *See* Anush Yegyazarian, *A Gated Internet*, THE WASH. POST Online, Feb. 3, 2006, http://www.washingtonpost.com/wp-dyn/content/article/2006/02/02/AR2006020200160.html (describing how these service providers promote selected content by prioritizing service to preferred sites).

150. *See, e.g.*, FERGUSON, *supra* note 5, at 145-46 (reviewing content providers' incentives to avoid providing easy access to Internet services that would compete with

II. BROADBAND DEREGULATION AND THE SUPREME COURT'S TELECOMMUNICATIONS TRILOGY OF 2004-2005

A. Historical Context of the Telecommunications Trilogy

When Congress proposed in the mid-1990s to reform the nation's telecommunications laws to increase competition, the Baby Bells opposed rules opening local telephone service to their competitors.[151] Congress planned to mandate that the Baby Bells share their networks and subscriber and billing information with competing local telephone service providers.[152] The Baby Bells would have to offer their competitors "just, reasonable, and nondiscriminatory" access to the network, by both interconnection and wholesale buying.[153] The Baby Bells agreed to these reforms in exchange for significant deregulation of their operations on other fronts, including statutory authorization to expand into "vast new geographic and product markets (including long distance, equipment manufacturing, and cable television)."[154]

Congress feared that the Baby Bells "could poison the compromise" by seeking "legal barriers . . . at the state level in order to restrain competition."[155] Recognizing the threat posed by state law barriers to universal service, Congress preempted such laws in enacting the 1996 Act.[156] Section 253(a) of the 1996 Act envisioned uninhibited competition in telecommunications services nationwide, notwithstanding inconsistent state or local laws. It stated that: "[n]o

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their traditional content delivery); In the Matter of Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities, Comments of the High-Tech Broadband Coalition, Dkt. No. 96-45, at 11-12 (June 17, 2002), http://gullfoss2.fcc.gov/prod/ecfs/comsrch_v2.cgi (search for "DiLallo" in the "Attorney Name" field, and specify the date of "06/17/2002") (explaining that some cable ISP subscriber agreements forbade "excessive bandwidth" consumption or operation of interactive video game servers); Time Warner Cable, *Time Warner Cable Residential Services Subscriber Agreement* § 6(a) (2006), http://help.twcable.com/html/twc_sub_agreement2.html (stating that Time Warner Cable High-Speed Data Service imposes "'consumption' limits (i.e., limits on the amount of data that [customers] may send or receive during the course of a month or over shorter periods) . . . as set forth in the price list or the Terms of Use," which Time Warner Cable may change "by amending the price list or Terms of Use").

151. *See* Carlson, *supra* note 31, at 46 (describing the tension between the act's popularity with members of Congress and resistance by Baby Bells and lobbyists).

152. *See id.* (characterizing the compromise between lawmakers and service providers).

153. Telecommunications Act of 1996, Pub. L. No. 104-104, § 101(a), 110 Stat. 56, 62-63 (adding 47 U.S.C. § 251(c)).

154. Carlson, *supra* note 31, at 46.

155. *Id.* at 47.

156. *Id.* (stating that Congress intended to carry out such preemption by mandating FCC enforcement).

State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."[157] Congress instructed the FCC to preempt the enforcement of any state or local law violating that section to the extent necessary to correct the violation.[158]

The context in which section 253(a) was enacted indicates that Congress intended to achieve high-quality and consumer-friendly universal service by the specific mechanism of preempting state law efforts to re-establish local telecommunications monopolies.[159] Thus, Congress created an exception to section 253(a), which shields "competitively neutral" state efforts "to preserve and advance universal service, protect the public safety and welfare, ensure the continued quality of telecommunications services, and safeguard the rights of consumers."[160] In section 254(b), moreover, Congress required the FCC to adopt policies for the advancement of universal service in all U.S. regions, and for access to service for consumers in all income groups "at just, reasonable, and affordable rates."[161]

Despite its statutory mandate to ensure universal telecommunications service at affordable rates, the FCC has rejected universal broadband access as an ideal.[162] The FCC has excluded broadband from the "basket of services [that are] eligible for federal universal service support."[163] Instead, the FCC included only telephone services such as a voice line, long distance, operator services, directory assistance, and emergency services such as 911.[164] Critics of the FCC have therefore pointed out that it is failing to carry out its responsibility under the 1996 Act to ensure that "'advanced telecommunications services'" are provided throughout the United States, including to "'low-income'" consumers and those in "'rural, insular, and high cost areas.'"[165]

157. 47 U.S.C. § 253(a).
158. 47 U.S.C. § 253(d).
159. *See supra* notes 155-156 and accompanying text (highlighting congressional concern that Baby Bells would seek legal barriers at the state level to prevent competition, which led to enactment of a provision in the 1996 Act to preempt such laws).
160. 47 U.S.C. § 253(b).
161. 47 U.S.C. § 254(b).
162. *See* Lennard G. Kruger & Angele A. Gilroy, Congressional Research Service, *Broadband Internet Access and the Digital Divide* 12 (Mar. 22, 2005), http://www.usembassy.it/pdf/other/RL30719.pdf (contending that while a joint board of federal and state officials originally defined universal access, the FCC has since failed to adequately expand this definition to encompass evolving technology).
163. *Id.*
164. *Id.*
165. *Id.* (quoting 47 U.S.C. § 254(b)(2)-(3)).

B. State Law Restraints on Municipal Broadband: Nixon v. Missouri Municipal League (2004)

Soon after the 1996 Act was passed, the FCC refused to exercise its authority under § 253(a) to preempt anticompetitive state laws that impeded municipal broadband service.[166] Instead, it interpreted the Act in discriminatory ways that benefited the broadband duopoly enjoyed by the cable and telephone companies, at the expense of municipal competition.[167]

Before disputes regarding municipal provision of telecommunications services were brought to its attention, the FCC construed the telecommunications laws in such a way that Congressional enactments would apply equally to public and private telecommunications providers. For example, in 1992, the FCC determined that the term "any corporation" in the 1934 Act included public telephone utilities.[168] Similarly, in 1997, the FCC concluded that the term "any entity" in the 1996 Act extended to municipal telecommunications firms for purposes of their universal service obligations.[169]

By contrast, when cities petitioned the FCC to carry out its statutory mandate under § 253(a) of the 1996 Act, the FCC construed "any entity" to exclude municipal entities, and thus to include only private entities.[170] Recall that § 253(a) requires that no state action "may prohibit . . . any entity to provide any interstate or intrastate telecommunications service."[171] Taking this language at face value, the City of Abilene, Texas petitioned the FCC shortly after the passage of the 1996 Act for authorization to serve the technological needs of its population of more than 100,000 by rolling out "'two-way audio, video and data transmission capabilities.'"[172] Despite its prior conclusion that the phrase "any entity" included municipal

166. *See In re* Public Util. Comm'n of Tex., 13 F.C.C.R. 3460, 3547 (1997), *cited in* City of Abilene v. FCC, 164 F.3d 49, 51 (D.C. Cir. 1999) (determining that Congress had not clearly signaled its intention to fully assume regulatory authority in a field typically monitored by the states).

167. *See id.* (allowing states to prohibit municipal market entry into telecom services).

168. *See City of Abilene*, 164 F.3d at 53 (citing *In re* IT&E Overseas, Inc., 7 F.C.C.R. 4023, 4025 (1992)) (arguing that in 1992, the FCC had construed the term "any corporation" in 47 U.S.C. § 153 to include Guam's public telephone company, preventing the territory from usurping federal regulatory power).

169. *See In re* Fed.-State Joint Bd. on Universal Serv., 12 F.C.C.R. 8776, 9172-76 (1997) (declining to construe the term "telecommunications services" in 1996 Act to mean only "for-profit" services, "when Congress could have, but did not, so state").

170. *See* Carlson, *supra* note 31, at 48 (conceding that debate over the meaning of "any entity" is ongoing).

171. 47 U.S.C. § 253(a).

172. *City of Abilene*, 164 F.3d at 50.

telecommunications providers, the FCC determined that § 253(a) did not preempt a Texas statute prohibiting municipalities from providing telecommunications services.[173]

To understand how the federal courts, and the Supreme Court in particular, have approached the dispute between municipalities and the FCC over the proper construction of § 253(a), some background on constitutional law is necessary. Starting in the 1980s, the Supreme Court, under Chief Justice William Rehnquist, orchestrated a "revival" of federalism, or even a "revolution" in states' rights.[174] Specifically, the Court expanded state sovereignty at the expense of federal constitutional rights, the powers of the U.S. Congress, and the jurisdiction of the federal courts.[175] In a series of five-four decisions, the Court unshackled the states from constitutional and Congressional limitations, in cases frequently involving the abuse of individual rights by powerful state officials and private actors.[176]

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173. *See id.* at 50-51 (citing *In re* Public Util. Comm'n of Tex., 13 F.C.C.R. 3460, 3547 (1997)) (explaining that the FCC surmised that Congress had not defined "entity . . . with sufficient clarity to warrant federal interference" in a field typically regulated by the states).

174. Richard H. Fallon, *The "Conservative" Paths of the Rehnquist Court's Federalism Decisions*, 69 U. CHI. L. REV. 429, 430 (2002).

175. *See, e.g.*, Bd. of Trs. of the Univ. of Ala. v. Garrett, 531 U.S. 356 (2001) (rendering states immune under the Eleventh Amendment from private suits brought by state employees pursuant to Title I of the Americans with Disabilities Act of 1990); United States v. Morrison, 529 U.S. 598 (2000) (deciding that Congress lacked authority to protect women from private violence through sections of the Violence Against Women Act of 1994); Kimel v. Fla. Bd. of Regents, 528 U.S. 62, 91-92 (2000) (insisting states are immune from private suits under the Age Discrimination in Employment Act of 1967 because Congress produced few factual findings to support the argument that the law should be construed as applying to state and local governments); Alden v. Maine, 527 U.S. 706, 758 (1999) (finding states immune under the Eleventh Amendment from private suits for damages pursuant to the Fair Labor Standards Act of 1938); Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank, 527 U.S. 627, 647-48 (1999) (holding states immune from private suits under federal patent law because a congressional attempt to abrogate that immunity under Article I of Constitution and Section 5 of the Fourteenth Amendment did not identify specific factual findings to establish a need for the law); Printz v. United States, 521 U.S. 898, 924 (1997) (proclaiming that Congress lacked the necessary power under the Commerce Clause to enact a law mandating local governments to perform background checks on gun buyers because Congress cannot directly force states to act through the clause); City of Boerne v. Flores, 521 U.S. 507, 534-36 (1997) (concluding that the Religious Freedom Restoration Act of 1993 exceeded Congress's power under Section 5 of the Fourteenth Amendment); United States v. Lopez, 514 U.S. 549, 600-02 (1995) (ruling that Congress lacked authority under the Commerce Clause to protect children from private violence by enacting Gun-Free School Zones Act of 1990); Dellmuth v. Muth, 491 U.S. 223, 230-33 (1989) (declaring that, barring very specific Congressional language to the contrary, states are immune under the Eleventh Amendment from private suits brought pursuant to the Education of the Handicapped Act of 1970, as amended).

176. *See, e.g.*, Steven G. Calabresi, *The Libertarian-Lite Constitutional Order and the Rehnquist Court*, 93 GEO. L.J. 1023, 1045 (2005) (reviewing MARK TUSHNET, THE NEW

The line of federalism cases that has most directly affected the municipal broadband issue is state sovereign immunity.[177] In 1985, the Supreme Court adopted the so-called "clear statement" rule for cases involving Congressional invasion of state sovereign immunity, holding that to abrogate a state's immunity from suit under the Eleventh Amendment, Congress must make "its intention unmistakably clear in the language of the statute."[178] Four years after that, the Court ruled that Congress had not been sufficiently clear in announcing its intention to subject state governments to private suits under the Civil Rights Act of 1871, the "Ku Klux Klan Act."[179]

In *Gregory v. Ashcroft*,[180] the Supreme Court utilized the "plain statement" rule of its Eleventh Amendment cases to resolve a question of statutory construction for the first time.[181] The Court did so in order to construe the Age Discrimination Act of 1967 ("ADEA") as not applying to state judges, even though Congress had expressed an intention that it apply to the states by passing an amendment in 1974 that subjected states and their political subdivisions to liability for age discrimination in their capacity as employers.[182] Justices Byron

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CONSTITUTIONAL ORDER (2003) (observing that the Rehnquist Court's "federalism revolution" was sustained by a "five-justice majority"); Erwin Chemerinsky, *The Rehnquist Revolution*, 2 PIERCE L. REV. 1, 8-12 (2004) (asserting that the Rehnquist Court's five-four federalism and sovereign immunity decisions denied individuals the benefits of congressionally-recognized "rights and protections against private infringers of liberty," and "ensure[d] that some individuals who have suffered egregious harms [at the hands of state governments] will be unable to receive redress for their injuries") (citing *Alden*, 527 U.S. 706; *Fla. Prepaid*, 527 U.S. at 629; *Kimel*, 528 U.S. at 82; *Morrison*, 529 U.S. 598; *Garrett*, 531 U.S. at 356); Byron Dailey, *The Five Faces of Federalism: A State-Power Quintet Without a Theory*, 62 OHIO ST. L.J. 1243, 1243 (2001) (asserting that "[t]he Rehnquist Court is well known for its many five-four decisions in favor of enhanced state power").

177. *See* City of Abilene v. FCC, 164 F.3d 49, 52 (D.C. Cir. 1999) (invoking state sovereignty case law to adjudicate the issue of a state's authority to regulate Internet access).

178. Atascadero State Hosp. v. Scanlan, 473 U.S. 234, 242 (1985).

179. *See* Will v. Mich. Dep't of State Police, 491 U.S. 58, 68-71 (1989) (concluding that because Congress had not engaged in an extended debate, the Court could not clearly discern the intentions of lawmakers). Section 1983 "is derived from section 1 of the Civil Rights Act of 1871," known as the Ku Klux Klan Act. David Jacks Achtenberg, *Taking History Seriously: Municipal Liability Under 42 U.S.C. § 1983 and the Debate Over Respondeat Superior*, 73 FORDHAM L. REV. 2183, 2186 n.10 (2005) (citing Act of Apr. 20, 1871, ch. 22, § 1, 17 Stat. 13).

180. 501 U.S. 452 (1991).

181. *See id.* at 475-76 (White, J., joined by Stevens, J., dissenting) (arguing that the "plain statement" rule derived from the Eleventh Amendment had previously governed only the question of "whether Congress intended a particular statute to extend to the States *at all*," and not, as in the instant case, "the precise details of the statute's application").

182. *See id.* at 475 ("In 1974, Congress amended the definition of 'employer' in the ADEA to include 'a State or political subdivision of a State.'" (quoting 29 U.S.C. § 630(b)(2) (2000))). This amendment triggered a provision of the ADEA that outlaws discrimination by an employer against any individual on the basis of age. *See*

White and John Paul Stevens objected that there was no "compelling reason" to extend the "plain statement" rule beyond the Eleventh Amendment context in which it arose.[183] They argued that while there may be doubt as to whether Congress intended certain other statutes to apply to the states at all, rendering it more appropriate to require a "plain statement" of legislative intent in such instances, there can be no doubt that Congress intended the ADEA to apply to the States.[184]

The "plain statement" rule proved fatal to cases brought by municipalities to challenge state laws prohibiting them from providing telecommunications services to their residents.[185] In addressing whether section 253(a) allowed the City of Abilene to provide telecommunications service, the FCC and D.C. Circuit used the "plain statement" rule to hold that Congress was not sufficiently clear when it preempted state laws having the effect of prohibiting "any entity" from providing telecommunications services.[186] In effect, the FCC and D.C. Circuit found that Congress meant to preempt only those state laws that prohibited any *private* entity from entering telecommunications markets.[187] The D.C. Circuit stressed that *Gregory* requires "unmistakable clarity" from Congress before the federal courts will find a state's exercise of its "'sovereign powers'" is preempted.[188]

When a number of municipalities and municipally owned utilities based in Missouri petitioned the FCC to preempt a Missouri statute

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id. (quoting 29 U.S.C. § 623(a)(1) (2000)) (explaining Congress's desire to extend the implications of the statute to states).

183. *See id.* at 476 (contending that the issue in *Atascadero State Hosp.* and *Will* was a narrower one of whether to apply a law to the states without express legislative language).

184. *Id.* To be fair to the *Gregory* majority, it also drew an analogy between its "plain statement" rule and prior cases including *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947), which required a clear indication of congressional intent to preempt state agricultural regulations, and *United States v. Bass*, 404 U.S. 336, 349 (1971), which required a clear indication of congressional intent to enact criminal statutes that intrude upon state criminal laws or jurisdiction. The requirement of a clearly expressed congressional intention to preempt state law could not justify the result in *Gregory*, however, because Congress plainly preempted state laws or practices that had the effect of discriminating on the basis of age. *See* 29 U.S.C. § 623(a)(1) (2000) (outlawing age discrimination by any "employer"); *id.* § 630(b)(2) (2000) (defining term "employer" to include "a State").

185. *See, e.g.*, City of Abilene v. FCC, 164 F.3d 49, 52 (D.C. Cir. 1999) (utilizing the plain statement rule to hold that Congress had not preempted a state's authority to bar its municipalities from offering telecommunications services such as Internet access).

186. *See id.* at 52-54 (spurning a broader interpretation of statutory language in favor of the strict principles articulated in *Gregory*).

187. *Id.* at 53-54.

188. *Id.* at 52 (*citing Gregory*, 501 U.S. at 460).

barring municipal entry into telecommunications markets, the FCC refused to read Congress's protection of "any entity" from anticompetitive state laws as extending to municipal telecommunications providers.[189] The FCC considered itself bound by the D.C. Circuit's decision in *City of Abilene v. FCC*, that section 253(a) did not satisfy the "plain statement" rule that *Gregory v. Ashcroft* had expanded to statutory construction cases.[190] Nevertheless, the FCC endorsed municipal entry into telecommunications as a policy tool:

> The Commission has found that municipally-owned utilities and other utilities have the potential to become major competitors in the telecommunications industry. In particular, we believe that the entry of municipally-owned utilities can further the goal of the 1996 Act to bring the benefits of competition to all Americans, particularly those who live in small or rural communities.[191]

According to the FCC, any concerns about unfair taxpayer subsidies and "possible regulatory bias" could be resolved "successfully through measures that are much less restrictive than an outright ban on entry."[192]

On appeal, the Eighth Circuit reversed the FCC's refusal to preempt Missouri's blanket ban on municipal telecommunications services.[193] The court had "no doubt" that a municipality was an "entity" for purposes of section 253(a).[194] The court reasoned that Black's Law Dictionary, for example, defines an "entity" as any organization, "'such as a business or a governmental unit,'" with a distinct legal identity.[195] Congress's insertion of the word "any" before "entity" removed whatever slight doubt might have remained, for the use of "any" prior to a noun had been repeatedly held by the Supreme Court to encompass all instances of the noun to which it

189. *In re* Mo. Mun. League, 16 F.C.C.R. 1157, 1158, 1172 (2001) (citing *In re* Pub. Util. Comm'n of Tex., 13 F.C.C.R. 3460, 3546, *aff'd sub nom. City of Abilene*, 164 F.3d 49).

190. *See id.* at 1164-65 (citing *City of Abilene*, 164 F.3d 49) (maintaining that the FCC was not persuaded by the municipalities' argument that *City of Abilene* should not bind the commission's decision).

191. *Id.* at 1162.

192. *Id.* at 1163. The FCC had made similar findings in the previous *City of Abilene* proceeding: "Municipal entry can bring significant benefits by making additional facilities available for the provision of competitive services." *Pub. Util. Comm'n of Tex.*, 13 F.C.C.R. at 3549.

193. Mo. Mun. League v. FCC, 299 F.3d 949, 955 (8th Cir. 2002), *rev'd*, Nixon v. Mo. Mun. League, 541 U.S. 125 (2004).

194. *Id.* at 953.

195. *Id.* (quoting BLACK'S LAW DICTIONARY 553 (7th ed. 1999)).

refers.[196] The Eighth Circuit therefore held that section 253(a) preempted Missouri law, insofar as the law purported to forbid municipalities and municipally-owned utilities from providing telecommunications services.[197]

On petition for certiorari, Justice Antonin Scalia's aggressive questioning during oral argument revealed his belief that Congress had already made a "plain statement" of its intent by using the phrase "any entity," as the Eighth Circuit had held.[198] To be any more clear, Congress would have had to say "any entity whatsoever," or "any entity (and we really mean it)."[199] Despite the clarity of the language adopted by Congress outlawing restraints on entry into telecommunications markets, the majority opinion of the Supreme Court held that was not "'unmistakably clear'" enough about embracing governmental telecom providers.[200] The Court argued that liberating municipal telecommunications providers from state law bans would have "strange and indeterminate results," specifically insofar as the providers would need to seek authorizing legislation and tax or bond funding to implement new network capacity.[201] Rather than investigating the legislative history of the 1996 Act, moreover, the Court speculated that "[t]here is every reason to expect . . . that legislative choices in this arena would reflect the intent behind the intense lobbying directed to those choices, manifestly intended to impede, not enhance, competition."[202]

But it is doubtful that the Supreme Court's ruling in *Missouri Municipal League*, or the D.C. Circuit's ruling in *City of Abilene*, gave effect to the "plain" or "clear" meaning of the phrase "any entity" in section 253(a).[203] As the City of Abilene pointed out, in construing a statute such as section 253(a) the plain and ordinary meaning of the

196. *Id.* at 953-54 (citing, *inter alia*, *Salinas v. United States*, 522 U.S. 52, 59-60 (1997), which held that the phrase "any business transaction" in a federal bribery statute applied to the defendant's bribe of a state official, notwithstanding the "plain statement" rule of *Gregory*).

197. *See id.* at 951, 955-56 (settling on a plain-language approach to the statute, and remanding to the FCC for further hearings).

198. *See* Transcript of Petitioner's Oral Arguments at 16-18, Nixon v. Mo. Mun. League, 541 U.S. 125 (2004) (Nos. 02-1238, 02-1386, 02-1405), 2004 U.S. TRANS LEXIS 4, *13-15 (Jan. 12, 2004), *available at* http://www.supremecourtus.gov/oral_arguments/argument_transcripts/02-1238.pdf (inquiring as to whether Congress had in fact made a plain statement of its intent).

199. *Id.* at 17, *14.

200. Nixon v. Mo. Mun. League, 541 U.S. at 141 (quoting Gregory v. Ashcroft, 501 U.S. 452, 460 (1991)).

201. *Id.* at 133.

202. *Id.* at 138.

203. *See* Carlson, *supra* note 31, at 48-49 (noting the ongoing judicial debate over congressional intent, despite five reasons for a broad interpretation).

word "entity" typically extends to any "'functional constituent of a whole'" and is "'the broadest of all definitions which relate to bodies or units.'"[204] Although municipalities "'never were and never have been considered as *sovereign* entities,'" as the D.C. Circuit noted in *City of Abilene*, Congress did not preempt state suppression of the provision of telecommunications services by "any sovereign entity," but by "any entity."[205] To contend that the phrase "any entity" applies only to private entities also flies in the face of the meaning of "any." The ordinary usage of the word "any" by Congress (and in plain speech) is "'all embracing,'" "'most comprehensive,'" "'indiscriminate[],'" "'negatives the idea of exclusion,'" and implies "'unlimited'" signification.[206]

The legislative history of section 253(a) also provides no basis for reading its preemption of anticompetitive state telecommunications laws as not applying to municipal utilities.[207] Section 253(a) began its path through Congress as section 230(a) of S. 1822, the Communications Act of 1994.[208] Hearings held in 1994 concerning S. 1822 apprised the Senate of the vitality of publicly funded telecommunications services.[209] Specifically, a representative of the American Public Power Association ("APPA"), the lobbying arm of the not-for-profit electric utilities,[210] testified that Congress should countenance no legal "obstacles in the path to public ownership of new telecommunications facilities or the public provision of telecommunications services," because "the goals of universal service and vigorous competition can be enhanced if such public ownership

204. Alarm Indus. Commc'ns Comm. v. FCC, 131 F.3d 1066, 1069 (D.C. Cir. 1997), *cited in* Brief for the Petitioner, at 29, City of Abilene v. FCC, 164 F.3d 49 (D.C. Cir. 1999) (No. 97-1633 and No. 97-1634), *available at* http://www.appanet.org/files/PDFs/t19980529.pdf.

205. City of Abilene v. FCC, 164 F.3d 49, 52 n.5 (D.C. Cir. 1999) (citations omitted).

206. Brief for the Petitioner, *supra* note 204, at 30 (quoting 3A CORPUS JURIS SECUNDUM 903); *see also id.* at 30-31 ("any entity" indicates an entity "selected without restriction or limitation of choice, with the implication that every one is open to selection without exception" (quoting WEBSTER'S NEW INTERNATIONAL DICTIONARY 121 (2d ed. 1957))).

207. *See generally* James W. Moeller, *Electric Utilities and Telecommunications*, 16 ENERGY L.J. 95, 141-46 (1995) (reviewing committee consideration of reforms, including the testimony and opinions of public utility firms and trade associations on the expected impact of the legislation).

208. *See* Communications Act of 1994, S. 1822, 103d Cong. § 253(a) (1994), *available at* http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=103_cong_bills&docid=f:s1822rs.txt.pdf (reforming the nation's telecommunications structure with the stated goal of promoting the general welfare).

209. The Communications Act of 1994: Hearing on S. 1822 Before the S. Comm. on Commerce, Science, and Transportation, 103d Cong. 354-355 (1994)

210. *See* Moeller, *supra* note 207, at 143 (describing the cooperation between industry lobbyists and lawmakers).

and involvement is encouraged."[211] The representative described how the "municipally owned electric utility" in Glasgow, Kentucky built a "two-way, digital, broadband communications system" that provided a "consumer-owned cable TV system," "a two-way, high-speed digital link to every classroom in the city," "high-speed network services for personal computers," and "digital telephone service."[212]

In assessing S. 1822 in 1994, the Senate agreed with the APPA about the viability of public utility provision of telecommunications services. The Senate Report on S. 1822 stated unambiguously that the legislation "allows *all* electric, gas, water, . . . and other utilities to provide telecommunications."[213] The report noted approvingly that "electric utilities in general have extensive experience in telecommunications operations. Utilities operate one of the Nation's largest telecommunications systems—much of it using fiber optics."[214] Senator Trent Lott, a cosponsor of S. 1822,[215] stated that "municipalities" are "positioned to make a real contribution in this telecommunications area, and I do think it is important that we make sure we have got the right language to accomplish what we wish accomplished here."[216]

The 104th Congress that passed the 1996 Act made repeated expressions of a legislative intent to strike down *all* state bans on entry into telecommunications services. At the conference committee stage in 1996, the conferees affirmed that the 1996 Act was consistent with well-regulated entry by "electric, gas, water or steam utilities" into the market for telecommunications services, and that "explicit prohibitions on entry by a utility into telecommunications are preempted under this section [253]."[217] Senator Bob Kerrey affirmed that: "Congress created Section 253" to preempt "[a]nti-competitive laws passed by state and local governments . . . that prohibit[] or significantly impair[] the ability of publicly-owned utilities to provide telecommunications services themselves or to make their facilities available to other potential

211. The Communications Act of 1994: Hearing on S. 1822 Before the S. Comm. on Commerce, Science, and Transportation, 103d Cong. 354-355 (1994) (statement of William J. Ray, Manager, Glasgow Electric Plant Board, on behalf of the APPA).
212. *Id.* at 356.
213. S. REP. NO. 103-367, at 22 (1994) (emphasis added).
214. *Id.* at 10.
215. *See* S.1822 at § 253(a) (listing Sen. Lott as a co-sponsor).
216. The Communications Act of 1994: Hearing on S. 1822 Before the S. Comm. on Commerce, Science, and Transportation, 103d Cong. 378 (1994).
217. Joint Explanatory Statement of the Committee of Conference, H.R. REP. NO. 104-458, at 127 (1996); *see also* S. Conf. Rep. 104-230, at 127 (1996) ("[E]xplicit prohibitions on entry by a utility into telecommunications are prohibited under [Section 253].").

providers of telecommunications services."[218] Senator Lott, the Majority Leader at the time, declared that Congress intended to erect "a framework where everybody can compete everywhere in everything," and remove "all barriers to and restrictions from competition."[219]

Congress also specifically considered and endorsed the idea that publicly-owned electric and other utilities would provide telecommunications services. The 1996 Act specifically authorized electric utilities, many of which are publicly owned and operated, "to provide telecommunications services, by repealing provisions of the Public Utilities Holding Company Act . . . which had prohibited private electric companies from diversifying."[220] Senator Kerrey stated that in selecting the phrase "any entity" in section 253(a), "Congress intended to give entities of all kinds, including publicly-owned utilities, the opportunity to enter these markets."[221] A Senate Report declared that entry by utilities could "significantly promote and accelerate competition in telecommunications services and deployment of advanced networks."[222]

C. Monopolization of Telecommunications Markets: Verizon Communications LLC v. Law Offices of Curtis V. Trinko (2004)

Congress enacted section two of the Sherman Act in 1890, following a long tradition of British statutory and common law, and American constitutional law, declaring monopolies, including merely local monopolies, to be unlawful and contrary to the freedom of trade.[223] Local network-based monopolies such as the Chicago Gas

218. Brief for the Petitioner, *supra* note 204, at 17.
219. *Id.* at 1 (quoting 141 CONG. REC. at S.7906 (1995) (emphasis added)).
220. Carlson, *supra* note 31, at 48 n.249 (citing 15 U.S.C. § 79(z)-5(c)(a)(1)(A) (1996)).
221. Brief for the Petitioner, *supra* note 204, at 17 (quoting 141 CONG. REC. at S.7906 (1995)).
222. S. REP. No. 104-23, at 4 (1995).
223. *See, e.g.*, MD. CONST. art. XXXIX (1776) ("[M]onopolies are odious, contrary to the spirit of a free government, and the principles of commerce, and ought not to be suffered."); The Statute of Monopolies, 1624, 21 Jac. c. 3 (1624), *reprinted in* vol. 4 pt. 2 STATUTES OF THE REALM at 1212 (William S. Hein & Co., 1993) (invalidating, with certain exceptions, all monopolies "of or for the sole buying[], selling[], making[], working[], or using[] of any thing[] within this Realm[]"); Darcy v. Allein (The Case of Monopolies), 11 Co. Rep. 84b, 77 Eng. Rep. 1260 (K.B. 1602) (invalidating national monopoly on manufacture or importation of playing cards as contrary to common law and several Acts of Parliament); The Cloth Workers of Ipswich, Godb. Rep. 252, 78 Eng. Rep. 147 (K.B. 1615) (invalidating a local monopoly over the tailor's trade within the town of Ipswich as an illegal attempt to "take away free trade which is the birthright of every subject"); Dier's Case, Y.B. Mich. 2 Henry 5, fo. 5, pl. 26 (C.P. 1414) (invalidating an attempt to secure a local monopoly over cloth dyer's trade through a promise by an apprentice not to

Trust had excited popular indignation, and state law enforcement action, prior to the Sherman Act being considered by Congress.[224] Through the Sherman Act, Congress aimed to reduce consumer prices,[225] increase the quality of available products and services,[226] and decentralize political and economic power.[227]

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compete with his master for six months after completion of the apprenticeship, on grounds that it was against common law); Hamlyn v. More, Y.B. Hil. 11 Hen. IV, fo. 47, pl. 21 (1410) (Hankforth, J.), *reprinted in* J.H. BAKER & S.F.C. MILSOM, SOURCES OF ENGLISH LEGAL HISTORY: PRIVATE LAW TO 1750 614 (1986) (holding that it would be "against reason" to recognize local monopoly in grammar school instruction); *see also* Standard Oil Co. v. United States, 221 U.S. 1, 54 (1911) ("[B]y the common law monopolies were unlawful because of their restriction upon individual freedom of contract and their injury to the public."); Butchers' Union Slaughter-House & Live-Stock Landing Co. v. Crescent City Live-Stock Landing and Slaughter House Co., 111 U.S. 746, 761 (1884) (Bradley, J., concurring) (declaring an "incontrovertible proposition of both English and American public law, that all *mere* monopolies are odious and against common right" (emphasis in original)); James Madison, *Monopolies. Perpetuities. Corporations. Ecclesiastical Endowments*, *in* JAMES MADISON: WRITINGS 756, 756 (Jack Rakove ed., 1999) (cautioning that monopolies "ought to be granted with caution," and therefore the U.S. Constitution has limited these grants to "two cases, the authors of Books, and of useful inventions"); EDWARD COKE, *Institutes of the Laws of England* vol. 3 181, 181 (facsimile ed., 1985) (1797) ("[A]ll grants of monopolies are again[s]t the ancient and fundamental[] laws of this kingdom[].").

224. *See, e.g.*, United States v. E.C. Knight Co., 156 U.S. 1, 29 (1894) (noting that People v. Chi. Gas Trust Co., 130 Ill. 269, 292, 297 (1889), revoked the charter of a "corporation formed for the purpose of operating gas works, and . . . of furnishing illuminating gas to the city of Chicago and its inhabitants," which was "designed and intended to . . . monopolize the gas business in Chicago" by "crushing out competition'"); Robert Donald, *Trusts in the United States*, 52 THE ECLECTIC MAGAZINE OF FOREIGN LITERATURE 223, 223, 225 (Aug. 1890) ("[T]he people are at last awakening to the dangers of Trusts. . . . Some Trusts are purely local concerns, such as . . . the Gas Trust in Chicago."). The gas trust supplied coal gas to thousands of consumers in Chicago via miles and miles of underground pipes and street mains. *See People's Gas Light & Coke Co.*, THE ELECTRONIC ENCYCLOPEDIA OF CHICAGO (2005), http://www.encyclopedia.chicagohistory.org/pages/2987.html (summarizing the history of Chicago's first gas company); *Gas and Electricity*, THE ELECTRONIC ENCYCLOPEDIA OF CHICAGO (2005), http://www.encyclopedia.chicagohistory.org/pages/504.html. (detailing Chicago's early experiences with the gas trust).

225. *See, e.g.*, 21 CONG. REC. 2462 (1890) (remarks of Sen. Sherman) (explaining that the Sherman Act intended to prohibit acts that "increase the price of articles"); *id.* at 1768 (remarks of Sen. George) (declaring that trusts have "extorted their ill-gotten gains from the poor"); *id.* at 2466 (remarks of Rep. Vest) ("We know very well that competition always reduces prices.").

226. *See, e.g.*, *id.* at 4102 (remarks of Rep. Fithian) (positing that "skill is created and is stimulated by competition," because with "monopoly . . . , the incentive for improvement and skill is deadened," while competition produces "wares both skillfully and cheaply made" (quoting an unspecified political writer)); Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65, 89 (1982) (arguing that the "legislative history of the Sherman Act . . . recognize[d] that free competition leads to efficient competitors").

227. *See, e.g.*, United States v. Aluminum Co. of Am., 148 F.2d 416, 428-29 (2d Cir. 1945) (relating that the authors of Sherman Act intended to break up "great aggregations of capital because of the helplessness of the individual before them," and promote "an organization of industry in small units"); *Standard Oil*, 221 U.S. at 50 (stating that the Sherman Act intended to redress "the vast accumulation of

The price-reducing and power-limiting objectives of the Sherman Act are shared in large part by the 1996 Act at the core of the telecommunications trilogy.[228] This Act aims to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid development of new telecommunications technologies."[229]

Although the overlay of telecommunications regulation should therefore have reinforced antitrust principles, it has too often undermined their effect. For example, a natural monopoly such as a telephone or broadband network may evade vigorous antitrust enforcement because federal judges and prominent commentators often hesitate to condemn a network industry monopolist for reaping what may only be a "fair" or "adequate" reward for investing in and controlling a network.[230] Courts and commentators also frequently

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wealth in the hands of corporations and individuals," and multiplication and exercise of power of trusts "to oppress individuals and injure the public"); United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290, 323 (1897) (arguing that the Sherman Act may be offended "by driving out of business the small dealers and worthy men whose lives have been spent therein," or the "the absorption of control . . . by an all-powerful combination of capital"); 21 CONG. REC. 2460 (1890) (remarks of Sen. Sherman) ("The popular mind is agitated with . . . the inequality of condition, of wealth, and . . . the concentration of capital into vast combinations to control production and trade and to break down competition."); *id.* at 2598 (remarks of Sen. George) (theorizing that "the present system of production and of exchange is . . . sure at some not very distant day to crush out all small men, all small capitalists, all small enterprises," taking trade "away from the great mass of the people" and placing it into hands of those few with "large, enormous fortunes"); *id.* at 3146 (remarks of Sen. Hoar) (listing the litany of public complaints that "these great monopolies . . . are becoming . . . a menace to republican institutions themselves, . . . induc[ing] Congress to take the matter up"); *id.* at 3147 (remarks of Sen. George) (explaining that "[b]y the use of this organized force of wealth and money[,] the small men engaged in competition with [large trusts] are crushed out, and that is the great evil at which all this legislation ought to be directed").

228. *See* Telecommc'ns Act of 1996, Pub. L. No. 104-104, 100 Stat. 56, 56 (1996 Act intended by Congress to lower telecommunications prices while enhancing service quality, promoting technological innovation, and breaking down the monopolies imposed by decades of anticompetitive regulation).

229. *Id.*; *see also* In the Matter of Implementation of the Local Competition Provision of the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325, 8 (Aug. 8, 1996) ("Under the 1996 Act, the . . . opening of all telecommunications markets to all providers will . . . bring new packages of services, lower prices and increased innovation to American consumers.").

230. *See, e.g.*, U.S. Telecom Ass'n v. FCC, 290 F.3d 415, 424, 427 (D.C. Cir. 2002) (arguing that construing 1996 Act as imposing too broad of a duty to share access to networks could deter investment by dominant firms in network infrastructure); 3A Phillip Areeda & Herbert Hovenkamp, ANTITRUST LAW ¶ 771b, at 171-72 (Aspen Law & Business 2d ed. 2002) (claiming that forced sharing of networks may reduce incentives to develop infrastructure); *see also* Kolasky, *supra* note 104, at 596-97 ("Especially in network industries where large fixed costs need to be incurred to build the network, the prospect of earning economic rents once the natural monopoly has been captured is what provides the incentive to innovate and

assume that any power over pricing, product or service quality in a natural monopoly market may have been thrust upon its beneficiary by economic necessity or government policy, rather than unilaterally seized by harmful exclusionary conduct such as refusals to deal, restrictive contracts, or mergers with rivals.[231]

The Supreme Court's equation of intentionally anticompetitive corporate lobbying for purposes of commercial advantage and "'corporate aggrandizement'" with the right of natural persons to petition their legislators for redress of grievances has resulted in further difficulties in enforcing the antitrust laws in the telecommunications industry.[232] So construed, the First Amendment shields cable and DSL companies from most antitrust liability for lobbying federal, state, or local governments for statutes or policies that entrench their economic positions and bar potential competitors from the marketplace.[233] According to this line of cases, liability for lobbying or petitioning the executive, legislative, or judicial branches of government may not be imposed on a company that "genuinely seeks to achieve [a] governmental result, but does so through improper means."[234] Lobbying only triggers antitrust claims in a "'sham' situation" where a defendant's "activities are 'not genuinely

invest . . . . '[C]ompetition is socially undesirable in natural monopoly industries.'") (citations omitted).

231. *See* Verizon Commnc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 407-08 (2004) (arguing that compelling firms to share networks that confer monopoly power by most efficiently serving consumers contradicts the purpose of antitrust law because it may reduce the incentive for companies to invest in such facilities); United States v. Aluminum Co. of Am., 148 F.2d 416, 430 (2d Cir. 1945) (clarifying that the Act should not penalize a company as a monopoly simply because it was the lone survivor out of a group of competitors); Alaska Airlines, Inc. v. United Airlines, Inc., 948 F.2d 536, 548 (9th Cir. 1991) (indicating that the antitrust laws tolerate both efficient monopolies and natural monopolies); Omega Satellite Prods. Co. v. City of Indianapolis, 694 F.2d 119, 126 (7th Cir. 1982) (recognizing the impracticability of applying antitrust laws to natural monopolies); Union Leader Corp. v. Newspapers of New England, 284 F.2d 582, 584 (1st Cir. 1960) (stating that a natural monopoly market does not of itself impose restrictions on one who actively, but fairly, competes for it); Kolasky, *supra* note 104, at 596-97 (discussing this principle); Stephen Breyer, REGULATION AND ITS REFORM 157 (Harvard Univ. Press 1982) (explaining that antitrust laws prohibit certain forms of monopolistic conduct but do not affirmatively order private firms to behave in certain ways).

232. Eastern R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127, 137-40 (1961); *see also* United Mine Workers v. Pennington, 381 U.S. 657, 670 (1965) (clarifying that *Noerr* allows firms to influence public officials without violating antitrust laws).

233. *See* James D. Hurwitz, *Abuse of Governmental Processes, the First Amendment, and the Boundaries of Noerr*, 74 GEO. L.J. 65, 66, 76-77 (2006) (articulating that the *Noerr* grants firms First Amendment immunity against antitrust law upon efforts to influence legislative, executive, administrative, and adjudicatory conduct by government).

234. City of Columbia v. Omni Outdoor Adver., Inc., 499 U.S. 365, 380 (1991) (citations, emphasis, and internal quotation marks omitted).

aimed at procuring favorable government action' at all."[235] The Sixth Circuit has held that the "*Noerr-Pennington* doctrine"[236] and First Amendment preclude antitrust liability based on a monopolistic network operator's petitioning of a local government to pass an ordinance barring another operator from obtaining a license to operate a competing network on more favorable terms.[237] Commentators have also suggested that the First Amendment might prevent antitrust liability from being imposed upon incumbent broadband providers that "seek anticompetitive federal and state laws," or that "persuade local decisionmaking bodies to restrain entry by public or private competitors."[238]

Given that mere possession of a network monopoly, and even lobbying to preserve or expand it, do not violate the antitrust laws, cases against network monopolists under the Sherman Act have focused on the acquisition of control over network choke points, and the refusal to share access to them, with the purpose of making effective competition impossible.[239] For example, the Supreme Court found long ago that a trade association unlawfully monopolized interstate commerce by the acquisition and combination into a system of railroad bridges, ferries, and terminals leading across the Mississippi River and to and from St. Louis, and the selective denial of access to that system of crossings to any railroad company not owned by a member of the association.[240] The Court condemned the defendants' "purpose of controlling or acquiring . . . a unified system of terminals" for their exclusive use as "an obstacle, a hindrance and a restriction upon interstate commerce, unless [the system] is the impartial agent of all who, owing to conditions, are under such compulsion, as here exists [due to the river], to use its facilities."[241]

More than thirty years later, the Supreme Court invalidated a scheme whereby the nation's major newspapers combined their

235. *Id.*
236. Hurwitz, *supra* note 233, at 66.
237. *See* Knology, Inc. v. Insight Commc'ns Co., No. 3:00 CV-723-R (W.D. Ky. preliminary injunction granted 2001), *rev'd*, 393 F.3d 656, 658-59 (6th Cir. 2004) (holding that the defendant company merely petitioned the local government to comply with its own ordinance, thus invoking *Noerr*'s immunity protection).
238. Jim Baller & Casey Lide, *Curbing Anticompetitive Practices by Cable Incumbents: If Not Now, When?*, 11 J. OF MUN. TELECOMM. POL'Y 24, 27 (2003) (citing Knology, No. 3:00 CV-723-R (W.D. Ky. 2001)).
239. *See* United States v. Terminal R.R. Ass'n, 224 U.S. 383, 395 (1912) (considering the intent of the defendant, the method used to consolidate control, and the manner in which the control was exerted).
240. *See id.* at 391-94, 410-11 (1912) (determining that the monopoly was administrative in nature, rather than natural, and thus unlawful).
241. *Id.* at 405.

resources into an "Associated Press" and shared news stories among its members, but excluded their local rivals from membership in a manner "'plainly designed'" to harm competition.[242] The Court declared that while one may "dispose of his property as he pleases,"[243] he may not combine with others in "concerted arrangements" that "pool[] their power to acquire, to purchase, and to dispose of [information] through the channels of commerce."[244] It also rejected a First Amendment defense in terms that would seem also to support heightened antitrust scrutiny of efforts by DSL or cable providers to lobby for state laws outlawing city-supported broadband:

> The First Amendment, far from providing an argument against application of the Sherman Act, here provides powerful reasons to the contrary . . . . Surely a command that the government itself shall not impede the free flow of ideas does not afford non-governmental combinations a refuge if they impose restraints upon that constitutionally guaranteed freedom. Freedom to publish means freedom for all and not for some. Freedom to publish is guaranteed by the Constitution, but freedom to combine to keep others from publishing is not. Freedom of the press from governmental interference under the First Amendment does not sanction repression of that freedom by private interests.[245]

Subsequent cases similarly found that denying customers access to critical inputs for their businesses, such as advertising space in a dominant local newspaper or licenses to play recorded music in conjunction with television programs, may constitute an antitrust violation if done with an intention to stop potential rivals from gaining a foothold or undercutting established prices.[246]

The antitrust precedent with arguably the most direct and controlling application to the struggle between owners of dominant broadband network and their upstart municipal or private

242. Associated Press v. United States, 326 U.S. 1, 11 n.7 (1945); *see also id.* at 15 (holding that such hampering of competitors was an unlawful consolidation of power).
243. *Id.* at 15.
244. *Id.* at 16.
245. *Id.* at 20.
246. *See* Lorain Journal Co. v. United States, 342 U.S. 143, 148 (1951) (rebuking an attempt to monopolize by dominant local newspaper that denied advertising to customers, even though it was essential for the promotion of their sales, after they had also advertised on a local radio station that threatened to erode newspaper's monopoly position); Broad. Music, Inc. v. Columbia Broad. Sys., Inc., 441 U.S. 1, 20-25 (1979) (ruling that lower courts should assess, under antitrust "rule of reason," the practice of copyright owners to refuse, for the purpose of eliminating price competition among themselves, to grant individual licenses to broadcast copyrighted music subject to blanket license arrangement that charged set fees or revenue percentages for licenses governing any or all songs in their catalogues).

independent competitors is *Otter Tail Power Co. v. United States*.[247] In that case, a private electric utility had enjoyed local monopolies in hundreds of towns for a period in excess of two decades, which it preserved by obtaining local municipal franchises lasting 10-20 years.[248] Its principal competition was from municipal electric power systems, which bought electricity at wholesale prices from private electric utilities like the defendant, as well as from local cooperatives and the federal government.[249] The defendant, however, not only "refus[ed] to sell power at wholesale to proposed municipal systems," but even declined to transmit electric power over its wires from other willing providers (such as local cooperatives or the federal Bureau of Reclamation).[250] The Supreme Court held that the defendant had unlawfully "used its monopoly power," and specifically its "'strategic dominance in the transmission of power in most of its service area'" to destroy competition, seize a competitive advantage, and "foreclose potential entrants into the retail area from obtaining electric power from outside sources of supply."[251] At the time, the Federal Power Act provided the Federal Power Commission with the authority, upon application of any electricity provider, to direct a public utility to sell or exchange energy with the provider unless the sale or exchange would "impair [the utility's] ability to render adequate service to its customers."[252] But the Court rejected the defendant's argument that this regulatory authority manifested an intention on the part of Congress "to insulate electric power companies from the operation of the antitrust laws."[253] Rather, the Court found that Congress had indicated "an overriding policy of maintaining competition to the maximum extent possible consistent with the public interest."[254]

While it has yet to hear a broadband antitrust case, the Supreme Court recently had occasion to adopt a framework for analyzing telecommunications monopolization cases, which lower courts have applied to allegations that broadband providers have harmed competition. In the same year that its ruling in *Missouri Municipal League*[255] reinforced the natural monopolies enjoyed by the Baby Bells

247. 410 U.S. 366 (1973).
248. *Id.* at 368-69.
249. *See id.* at 371, 378, 388 (emphasizing that no engineering factors prevented the defendant from selling power at wholesale or wheeling the power from willing providers).
250. *Id.* at 368.
251. *Id.* at 377 (citation omitted).
252. *Id.* at 375 n.7.
253. *Id.* at 374.
254. *Id.*
255. 541 U.S. 125 (2004).

by allowing the states to prohibit municipal competition in telecommunications markets, the Supreme Court had a chance to limit the power of those monopolies in its first important antitrust case in nearly a decade.[256] Verizon was the defendant, in a case implicating the critical issues of the scope of section two of the Sherman Antitrust Act, the "essential facilities" and "monopoly leveraging" doctrines developed under that section, and the interaction of these doctrines with the anti-monopoly provisions of the 1996 Act.[257] Previously, in *Missouri Municipal League*, the Baby Bells, led by Verizon, had pleaded with the Court to overrule the Eighth Circuit's pro-competitive decision, arguing that state sovereignty should trump section 253(a) preemption.[258] They complained that municipalities would, among other things, "maintain artificially low rates" for broadband and other telecommunications services.[259]

The case against Verizon[260] arose out of a consent decree the company entered into with the FCC in 2000 in which it agreed to pay the U.S. government $3 million and its competitors $10 million in compensation for its unlawful acts.[261] The decree resolved charges that Verizon had breached its duties under the 1996 Act and a 1997 agreement requiring it to give AT&T access to the local telephone network.[262] In a complaint filed in federal court, Trinko, a law firm, sought compensation for consumers damaged in the form of degraded local AT&T telephone service because of Verizon's "attempt to maintain its monopoly power by refusing to provide equal access to its local network."[263] The Trinko firm alleged, for example, that it had lost telephone calls because Verizon had ignored or delayed AT&T's access to the call ordering system.[264]

256. *See* William Kolasky, *Supreme Court in Search of Limiting Principles* (2004), http://www.wilmer.com/files/tbl_s29Publications%5CFileUpload5665%5C4619%5Cexpertguide%20competition.pdf (commending the Supreme Court for defining the limits of antitrust intervention).

257. *Id.*

258. *See* Brief for U.S. Telecom Ass'n et al. as Amicus Curiae Supporting Petitioners 1, 3, Nixon v. Missouri Municipal League, 541 U.S. 125 (2004) (Nos. 02-1238, 02-1386, & 02-1405), *available at* http://www.baller.com/pdfs/usta_verizon_amicibr.pdf (claiming a state right to intervene when subdivisions undertake risky capital investments in competition with private entities).

259. *Id.* at 20.

260. The case was initially brought against Verizon's predecessor Bell Atlantic prior to its merger with GTE Corporation, Law Offices of Curtis V. Trinko v. Bell Atl. Corp., 305 F.3d 89, 92 n.1 (2d Cir. 2002), *rev'd*, 540 U.S. 398 (2004).

261. *Id.* at 95.

262. *Id.* at 94-95.

263. *Id.* at 106.

264. *See id.* at 95 (arguing that Bell Atlantic intentionally excluded competition and had no valid business reason for its conduct).

The district court dismissed the case on the basis that an allegation of a refusal to provide access mandated by the 1996 Act does not state a section two claim.[265] The Second Circuit disagreed, relying on extensive authority to the effect that owners or operators of network-based monopolies may not legally refuse to provide their competitors with access to "essential facilities" on the network that are needed to compete effectively.[266] The court added that the complaint adequately alleged that Verizon was engaged in "monopoly leveraging" prohibited under section two, or the exercise of "a competitive advantage in a retail market in which telecommunications carriers sell local phone service to consumers" derived from monopoly power over the wholesale market in telephone network access.[267]

The Supreme Court reversed the Second Circuit's ruling that the Trinko firm's antitrust claim should be allowed to proceed.[268] The Court held that the section two claim did not hold water under existing authorities governing a monopolist's duty to deal with its competitors.[269] Specifically, Verizon had not refused to deal with a competitor in a market that Verizon had previously entered voluntarily, but had instead provided AT&T with discriminatory and inadequate access to the ordering system that Verizon would not have had to open up to competitors at all if not for the 1996 Act.[270] The Court's previous cases had imposed liability principally for acquisition or maintenance of a monopoly by denying a competitor access to a product the monopolist already sold voluntarily (such as lift tickets or

265. *See* Law Offices of Curtis V. Trinko v. Bell Atl. Corp., 123 F. Supp. 2d 738, 742 (S.D.N.Y. 2000) (holding that competition necessarily involves impairing the opportunities of rivals and does not automatically implicate antitrust laws).

266. *Trinko*, 305 F.3d at 107-08 ("[A] monopolist has a duty to provide competitors with reasonable access to 'essential facilities,' facilities under the monopolist's control and without which one cannot effectively compete in a given market." (citing S. Pac. Commc'ns Co. v. AT&T, 740 F.2d 980, 1009 (D.C. Cir. 1984) (citing *Terminal R.R. Assoc.*, 224 U.S. at 411))); *see id.* at 110 (articulating that the 1996 Act encourages market competition and governs interconnection relationships by business judgment, not regulatory coercion) (citing *Otter Tail Power*, 410 U.S. 366)).

267. *Id.* at 108; *see also id.* at 108 (declaring that a monopoly leveraging claim requires that the "defendant '(1) possessed monopoly power in one market; (2) used that power to gain a competitive advantage . . . in another distinct market; and (3) caused injury by such anticompetitive conduct.'" (quoting Virgin Atl. Airways v. British Airways, 257 F.3d 256, 272 (2d Cir. 2001))).

268. *See* Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 416 (2004) (arguing that the Sherman Act does not give judges unlimited power to intervene every time a monopoly occurs).

269. *Id.* at 410.

270. *See id.* at 409 (distinguishing *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), as anticompetitive intent in that case was inferred from the termination of a profitable venture to pursue an anticompetitive end).

the transmission of electrical power).[271] The Trinko firm, by contrast, had alleged that Verizon had violated duties created by the 1996 Act to create a new market in the constituent elements of telecommunications networks.[272] Rather than boycotting a competitor by denying it sales of an essential product at the going retail price, Verizon had simply malingered in its implementation of the 1996 Act's mandate to share access to its network at a reasonable and nondiscriminatory wholesale price.[273]

This result might have had little effect on the broadband industry, had the Court not expressly declined to endorse certain antitrust principles that are critical to resolving broadband monopolization cases, such as the "essential facilities" and "monopoly leveraging" doctrines that a number of federal appellate courts have recognized.[274] The Court declared that it had never even recognized the "essential facilities" doctrine, and refused to do so in this case, even though it had resolved several previous cases in ways that other courts understood as announcing very similar principles.[275] The Court reasoned that "essential facility claims should . . . be denied where a state or federal agency has effective power to compel sharing

271. *See id.* at 409-10 (asserting that the defendants in *Aspen Skiing* and *Otter Tail Power* had violated previously-established duties to existing customers whereas Verizon withheld services that were not available to the public).

272. *Id.* at 410.

273. *Id.* at 402, 405-06.

274. *See id.* at 410-11, 415 n.4 (refraining from recognizing or repudiating the doctrines because neither applied to the particular case at hand). These courts include, most notably, the U.S. Courts of Appeal for the Second, Seventh, Ninth, Eleventh, and D.C. Circuits. *See, e.g.*, Covad Commc'ns Co. v. BellSouth Corp., 299 F.3d 1272, 1285 (11th Cir. 2002) ("Under the well-established 'essential facilities' doctrine, an inference of anticompetitive intent in violation of Section 2 arises upon a showing of four elements: (1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility." (citing MCI Commc'n Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1132-33 (7th Cir. 1983))); *id.* at 1284 ("Monopoly leveraging occurs when a firm uses its market power in one market to gain market share in another market other than by competitive means." (citing Aquatherm Indus., Inc. v. Fla. Power & Light Co., 145 F.3d 1258, 1262 (11th Cir. 1998) (citing Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 276 (2d Cir. 1979))), *vacated*, 2004 U.S. LEXIS 670 (2004), *after remand,* 374 F.3d 1044 (11th Cir. 2004); *Trinko*, 305 F.3d at 108-10 (discussing the validity of the plaintiff's claims under the essential facilities and monopoly leveraging doctrines) (citing, inter alia, *Otter Tail Power*, 410 U.S. 366, S. Pac. Commnc'ns, 740 F.2d at 1009); *Virgin Atl. Airways*, 257 F.3d at 272 (rejecting the viability of the claim for monopoly leveraging because the plaintiff failed to define in which markets the defendant exercised monopoly power); Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1356-60 (Fed. Cir. 1999) (rebuffing antitrust claims under monopoly leveraging and essential facilities theories because the plaintiff did not prove that the defendant had market power or a competitive relationship with the plaintiff).

275. *Trinko*, 540 U.S. at 411.

and to regulate its scope and terms."[276] Considerations of judicial competence were prominent in the Court's reasoning, because a federal agency like the FCC may be better equipped to resolve "highly technical" complaints about violations of the 1996 Act, and a more "effective day-to-day enforcer of these detailed [local network] sharing obligations."[277] The FCC has the power to reward those incumbents who obeyed the 1996 Act's sharing obligations with the lucrative right to enter other telecommunications markets such as long-distance telephone service.[278]

Paradoxically, then, the fact that Verizon had brazenly violated its sharing duties under the 1996 Act undermined, rather than supported, the Trinko firm's case seeking compensation for those violations.[279] This result is highly questionable given the fact that section 601(b)(1) of the 1996 Act provides that "nothing in this Act . . . shall be construed to modify, impair, or supersede the applicability of any of the antitrust laws."[280] Congress specifically intended this clause to "prevent[] affected parties from asserting that the [Act] impliedly pre-empts other laws."[281] The Supreme Court acknowledged that this savings clause meant that Verizon did not enjoy the type of "implied immunity" from antitrust claims that certain issuers and dealers in securities do under the federal securities laws.[282] Still, the Court's reliance on the 1996 Act's sharing obligations, and the FCC's jurisdiction to enforce them, seems to achieve an implied repeal of the antitrust laws in the context of

276. *Id.* (citing 3A PHILLIP AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 773e, at 150 (2003 Supp.)).
277. *Id.* at 414-15.
278. *See id.* at 402-03, 412-13 (noting that the FCC's oversight of Verizon's activities performed many of the functions of antitrust laws, limiting the need for judicial interference).
279. *Supra* notes 268-273 and accompanying text.
280. 47 U.S.C. § 152.
281. H.R. CONF. REP. NO. 104-458, at 201 (1996).
282. *Trinko*, 540 U.S. at 406-07. *Compare, e.g.*, United States v. Nat'l Ass'n of Sec. Dealers, Inc., 422 U.S. 694, 729-30 (1975) (holding that federal antitrust laws must give way if its application would seriously compromise the authority of regulatory agencies like the SEC (citing Silver v. N.Y. Stock Exch., 373 U.S. 341 (1963))), *with* Friedman v. Salomon/Smith Barney, Inc., 313 F.3d 796, 802-03 (2d Cir. 2002) (holding that Securities Exchange Act of 1934 impliedly repealed section one of Sherman Act to extent it would otherwise apply to collusive activity designed to stabilize securities prices and prohibit flipping), *In re* Stock Exchs. Options Trading Antitrust Litig., 317 F.3d 134, 148-50 (2d Cir. 2003) (holding that Securities Exchange Act of 1934 impliedly repealed section one of Sherman Act to extent that it would otherwise apply to conspiracy to restrain options trading), *and* Billing v. Credit Suisse First Boston Ltd., 426 F.3d 130, 142-44, 169-70 (2d Cir. 2005) (holding that Securities Exchange Act of 1934 did not impliedly repeal of section one of Sherman Act to extent it would otherwise apply to tying of certain securities offerings to purchases of other securities or payments of inflated commissions).

telecommunications monopolies acquired or maintained by violations of the 1996 Act.[283] The Court may therefore have granted telecommunications monopolists an "implied immunity" from the antitrust laws by the back door, so to speak.[284]

The result in *Trinko* seems especially perverse when it is considered in light of the Court's ruling in an analogous case brought under the 1934 Act. Like the 1996 Act, the 1934 Act granted no antitrust immunity to telecommunications monopolists.[285] In a case decided under 1934 Act, therefore, the Supreme Court held that FCC approval of a television industry acquisition as being "in the public interest" was no defense to an antitrust claim arising out of that same acquisition.[286] The Court's reasoning in this early case is squarely applicable to the *Trinko* case: "a determination [by the FCC] of 'public interest, convenience, and necessity' cannot either constitute a binding adjudication upon any antitrust issues that may be involved in the [FCC] proceeding or serve to exempt a licensee *pro tanto* from the antitrust laws . . . ."[287] If the FCC's issuance of an express *approval* to a business arrangement cannot be a defense to a subsequent antitrust claim, it is difficult to imagine why the FCC's *condemnation* of

283. One commentator has described the Court's opinion in *Trinko* as "wistful" about the fact that Congress had denied it the ability to find an implied repeal of the Sherman Act by the 1996 Act. Thomas E. Kauper, *Section Two of the Sherman Act: The Search for Standards*, 93 GEO. L.J. 1623, 1638 (2005). "Barred from simply concluding that the Telecommunications Act created an implied immunity," the Court nevertheless used the regulatory structure erected by the 1996 Act to displace and undermine the antitrust case against telecommunications firms who monopolize "essential facilities." *Id.* at 1639. Another commentary criticizes *Trinko* in even harsher terms, claiming that it "does not rest easily with the [1996] Act's antitrust savings clause" and may in fact effectuate a "judicial nullification of the savings clause." James E. Scheuermann & William D. Semins, *A New Method for Regulatory Antitrust Analysis? Verizon Communications Inc. v. Trinko*, 12 RICH. J.L. & TECH. 1, 15 (2005).

284. Indeed, the breakup of the Bell system and AT&T's monopoly over many telecommunications markets may never have occurred had *Trinko* been decided prior to 1974. *See, e.g.*, Kauper, *supra* note 283, at 1639-40 ("[O]ne may wonder whether the 1974 complaint in the AT&T case would be sustainable under *Trinko*."); John Thorne, *A Categorical Rule Limiting Section 2 of the Sherman Act:* Verizon v. Trinko, 72 U. CHI. L. REV. 289, 294-95 (2005) (describing Professor Kauper as "Former Department of Justice Antitrust Division chief . . . , who filed the government's 1974 complaint that resulted in the breakup of the AT&T Bell System monopoly").

285. *See* United States v. Radio Corp. of Am., 358 U.S. 334, 346 (1959) (ruling that the 1934 Act was not intended to prevent enforcement of antitrust laws in federal court).

286. *Id.* Under the deal challenged by the government, the National Broadcasting Company ("NBC") acquired a television station in Philadelphia, then the nation's fourth largest television market, in exchange for the transfer of NBC's Cleveland station plus $3 million to the owner of the Philadelphia station, the Westinghouse Broadcasting Company. *Id.* at 335-36.

287. *Id.* at 353.

a practice as violative of the law and worthy of a substantial fine would be a defense.

Congress knows how to grant express immunity to the antitrust laws by inserting a line or two into a statute, but declined to do so in enacting the 1996 Act. For example, amendments to the Interstate Commerce Act of 1887 provided that railroads participating in a transaction approved or authorized by the Interstate Commerce Commission "shall be and they are relieved from the operation of the antitrust laws . . . ."[288] Likewise, the Federal Aviation Act of 1958 provided that any entity affected by an order of the Civil Aeronautics Board was "relieved from the operations of the 'antitrust laws,'" including the Sherman Act, "insofar as may be necessary to enable such person to do anything authorized, approved, or required by such order."[289]

Such a clear demarcation of authority between executive branch oversight and enforcement on the one hand, and civil and criminal antitrust liability on the one hand, is strikingly absent from the 1996 Act in light of its savings clause.[290] In fact, the 1996 Act more closely resembles the Bank Merger Act of 1960, which provided for oversight and approval of bank deals by the Comptroller of the Currency, but

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288. An Act to Regulate Commerce, § 5 (11), 24 Stat. 379, 380 (1887), *as amended by* Transportation Act of 1920, § 5 (11), ch. 91, 41 Stat. 480, *recodified at* 49 U.S.C. § 5(11) *by* Transportation Act of 1940, § 7, ch. 722, 54 Stat. 908-09, *repealed by* ICC Termination Act of 1995, § 102(a), Pub. L. No. 104-88, 109 Stat. 804, 49 U.S.C. § 701 note; *see, e.g.*, McLean Trucking Co. v. United States, 321 U.S. 67, 80 (1944) (holding that section 5(11) immunized consolidation of eight motor carriers from antitrust scrutiny, although the Interstate Commerce Commission could not "ignore" antitrust law entirely).

289. Federal Aviation Act of 1958, § 414, 49 U.S.C. § 1384; *see also* Hughes Tool Co. v. TWA, 409 U.S. 363 (1973) (holding that sale or lease of aircraft, approved by Civil Aeronautics Board, was immune from antitrust scrutiny). Similarly, Congress amended the Clayton Act in 1950 to provide that the Act's restrictions on mergers would not apply to "transactions duly consummated pursuant to authority given by the Secretary of Transportation, Federal Power Commission, Surface Transportation Board, . . . the United States Maritime Commission, or the Secretary of Agriculture under any statutory provision vesting such power in such Commission, Board, or Secretary." 15 U.S.C. § 18 (2005). Even this broad language does not shield all anticompetitive agreements or practices approved by or under the jurisdiction of federal regulators. *See* Milk Producers Ass'n v. United States, 362 U.S. 458, 469-70 (1960) (ruling that the Clayton Act § 18 only shields agricultural "marketing agreements" from antitrust actions); *see also* California v. Fed. Power Commc'n, 369 U.S. 482 (1962) (holding that the Clayton Act § 18 did not necessarily legalize anticompetitive merger authorized by Federal Power Commission).

290. *See* Herbert Hovenkamp, *Antitrust and the Regulatory Enterprise*, 2004 COLUM. BUS. L. REV. 335, 377 ("Considered in this light, the most sensible reading of the 1996 Act's Saving Clause is that it preserves intact the system of regulatory rules that . . . continues to govern most regulated industries. Under these rules there is no blanket immunity from the antitrust laws. Further, behavior that is never disclosed to the agency, perhaps because it is surreptitious, is not immune.").

created neither an "express immunity" from the antitrust laws nor a "plain repugnancy" between the antitrust and banking laws.[291]

Soon after deciding *Trinko*, the Supreme Court remanded a case that had condemned a series of anticompetitive actions in violation of the 1996 Act committed by a large Baby Bell, Bellsouth, to the detriment of the independent DSL company Covad.[292] Three former Intel executives founded Covad in order to take advantage of the 1996 Act's provisions for open access to telephone networks by deploying the Bell companies' underutilized DSL technology to build a national broadband network.[293] Pursuant to the 1996 Act, Bellsouth agreed to provide Covad with "just, reasonable, and nondiscriminatory" access to its telephone network and related infrastructure.[294] After having its access to the network routinely delayed and denied, Covad sued Bellsouth under section two of the Sherman Act for violating the 1996 Act and imposing "inordinately high costs" on Covad for wholesale DSL access, but "inordinately low costs" for retail DSL access, so that Covad was "squeezed out" of competing profitably in the DSL market.[295]

Before *Trinko* was decided, the Eleventh Circuit held that Covad had stated valid claims under section two of the Sherman Act for unlawful refusals to deal, discriminatory denials of access to "essential facilities," and an anticompetitive "price squeeze."[296] On remand after *Trinko*, the Eleventh Circuit held that Covad's refusal to deal and "essential facilities" claims could no longer survive a motion to dismiss, because the FCC can force Baby Bells like Bellsouth to

291. United States v. Philadelphia Nat'l Bank, 374 U.S. 321, 331-33, 350-51 (1963).

292. BellSouth Corp. v. Covad Commc'ns Co., 540 U.S. 1147 (2004).

293. *See* The Internet Freedom and Broadband Deployment Act of 2001: Hearings on H.R. 1542 Before the H. Comm. on Energy and Commerce, 107th Cong. 71-72 (2001) (statement of Charles J. McMinn), *available at* http://energycommerce.house.gov/107/action/107-24.pdf ("Two colleagues and I founded Covad in October of 1996, just months after [Congress] passed the Telecommunications Act. We took DSL technology—which had been collecting dust on the shelves and in the warehouses of the Bell companies for over six years and quickly used it to build a broadband network that can reach nearly half of the homes in America."); Todd Wallack, *Covad Makes Comeback from Bankruptcy*, S.F. CHRON., Sept. 6, 2002, at B1, *available at* http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2002/09/06/BU223276.DTL&type=business ("Covad, [was] founded in 1996 by three former Intel executives").

294. Covad Commc'ns Co. v. BellSouth Corp., 299 F.3d 1272, 1277 n.3 (11th Cir. 2002).

295. *Id.* at 1278.

296. *See id.* at 1288 (deciding that the plaintiff adequately alleged that the defendant attempted to leverage its monopoly power by giving itself preferential access to its essential facilities).

provide access to their telephone networks under the 1996 Act.[297] Only Covad's price squeeze claim could go forward, because the Supreme Court had not yet "specifically barred" it in *Trinko*.[298] Subsequently, the D.C. Circuit found that another case brought by Covad against a Baby Bell had been decimated by the 1996 Act.[299]

The Supreme Court in *Trinko* eviscerated most potential antitrust claims that could be brought by upstart broadband providers against cable and DSL monopolists and other anticompetitive actors.[300] The case went far beyond resolving an obscure local telephone billing dispute, to damage if not destroy the deterrent effect of the Sherman Act in the context of regulated industries such as telecommunications.[301] After *Trinko*, courts will dismiss many monopolization claims implicating broadband markets in favor of a vision of "idealized or imaginary" enforcement by the FCC of dominant firms' regulatory obligations.[302] Therefore, the nation's principal hope for new entry into broadband markets will depend on both municipal broadband and the telecommunications laws, and specifically, in the latter context, how the FCC actually polices dominant firms' obligations to provide just, reasonable, and

297. *See* Covad Commc'ns Co. v. BellSouth Corp., 374 F.3d 1044, 1049-50 (11th Cir. 2004) (rejecting Covad's refusal-to-deal claim because it did not allege the requisite unilateral termination of a voluntary course of dealing).

298. *Id.* at 1050.

299. *See* Covad Commuc'ns v. Bell Atl., 398 F.3d 666, 669 (D.C. Cir. 2005) (alleging that defendant breached various duties upon it by the 1996 Act and engaged in other anticompetitive acts). Covad had alleged that Bell Atlantic refused to deal with it by denying access to the wires and infrastructure used to deliver DSL, engaged in a "price squeeze," disseminated false advertising about the availability of Bell Atlantic DSL, discriminated against customers who had ordered DSL from Covad, and filed a meritless patent suit against Covad in bad faith. *See id.* at 670. The D.C. Circuit held that only Covad's claim for discrimination against Bell Atlantic subscribers who ordered DSL from Covad survived as a predatory practice actionable under pre-*Trinko* antitrust law absent a legitimate business justification. *See id.* at 675-76 (articulating that predatory pricing requires the defendant to incur short term losses that it should reasonably expect to regain under the benefits of the monopoly (citing Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588-89 (1986), and Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222-23 (1993))).

300. *See* Verizon Commc'n Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 398 (2004) (holding that the Trinko firm's antitrust action against Verizon, alleging breach of an incumbent LEC's 1996 Act duty to share its network with competitors, failed to state a claim under section two of the Sherman Act).

301. *See Industry Competition and Consolidation: The Telecom Marketplace Nine Years After the Telecom Act: Hearing Before the H. Comm. on the Judiciary*, 109th Cong. 34 (2005) (statement of Philip L. Verveer, Willkie Farr & Gallagher, LLP) (asserting that *Trinko* significantly weakened the Sherman Act's authority to correct instances of monopolization because the decision overestimates the ability of regulatory agencies to adjudicate monopolization claims; emphasizes a methodology that examines parts of section two claims, rather than the whole claim; and is based on an idealized business environment, not a practical evaluation of the given facts).

302. *Id.* at 35.

nondiscriminatory access to their competitors. As we shall see, the FCC has failed to take up the mandate of promoting telecommunications competition that *Trinko* left to its discretion, rendering legislative action to promote broadband competition a top priority.[303]

D. The End of Open Access?: National Cable and Telecommunications Association v. Brand X Internet Services (2005)

The lack of effective competition in many American broadband markets may be explained in part by the absence of a vigorous national policy to open up broadband networks to competition via "open access" rules.[304] In several other countries, notably France and Japan, the government promotes low prices and ultra-high-speed service by means of compulsory "unbundling" of the telephone network from the exclusive control of the network owner's own DSL service division.[305] Such nations have implemented broadband access at ten times the speed and half the price of typical U.S. service by mandating that the owners of residential telephone networks open them up to access by competitors at the same wholesale price.[306]

In this country, the telephone networks have not been opened up to DSL competition to a comparable extent.[307] A court ruling in 2002 made it difficult for competing telecommunications firms to obtain

303. *See infra* Part III.D (discussing the FCC's inability to effectively regulate the Baby Bells' networks so as to allow greater network access for telecommunications competitors, and outlining the necessity of congressional efforts to remedy the high entry barriers to the cable and DSL broadband markets faced by developing telecommunications companies).

304. *Cf.* Jesse Drucker, *For U.S. Consumers, Broadband Service Is Slow and Expensive*, WALL ST. J., Nov. 16, 2005, at B1 (arguing that France's national policy of ensuring equal broadband accessibility for all telecommunication providers has encouraged a more competitive broadband market).

305. *See* Hidenori Fuke, *The Spectacular Growth of DSL in Japan and Its Implications*, 52 COMM. & STRATEGIES 175, 179-88 (2003) (finding that Japan became one of the world's most advanced countries with respect to the deployment of broadband access, by means of forced sharing of metallic and fiber networks used to deliver DSL service); Drucker, *supra* note 304, at B1 (proffering that France's low priced and high quality broadband, relative to the United States, is a result of its policies mandating that "big carriers" share networks with competitors).

306. *See* Robert McChesney & John Podesta, *Let There Be Wi-Fi*, WASH. MONTHLY, Jan./Feb. 2006 at 14 ("The Japanese built their world-class system by ensuring 'open access' to residential telephone lines, meaning competitors paid the same wholesale price to use the wires."); *see also* Drucker, *supra* note 304, at B1 (lauding the successes derived from France's "unbundling" rules).

307. *See* McChesney & Podesta, *supra* note 304, at 14 ("Instead of encouraging competition, the FCC has allowed DSL providers and cable companies to shut out competitors by denying access to their lines."); Drucker, *supra* note 304, at B1 (noting that "unbundling," responsible for higher quality broadband service in France, is a "dead" issue in the United States because of successful lobbying efforts by telephone companies).

access on commercially viable terms to DSL-capable networks controlled by the Baby Bells.[308] The court's opinion ignored the language of the 1996 Act in a manner that would be repeated in *Missouri Municipal League*.[309] The clear language of the 1996 Act mandated the FCC to implement regulations requiring the Baby Bells to "provide, to any requesting telecommunications carrier . . . , nondiscriminatory access to network elements on an unbundled basis" and "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[310] Congress specifically directed the FCC to consider, in adopting such regulations, whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[311] The FCC found that competing telecommunications companies would indeed find their ability to provide services impaired by a failure to force the Baby Bells to share access to their local telephone network monopolies, which would require new entrants to duplicate the network unnecessarily, causing delays, higher costs, and less frequent entry.[312] The D.C. Circuit held that the FCC had unlawfully failed to consider, before imposing forced sharing of telephone lines capable of delivering DSL broadband, whether there was adequate alternative broadband infrastructure for independent DSL ISPs to use, in the form of the cable networks.[313] As the FCC predicted, independent DSL

308. *See* U.S. Telecomm. Ass'n v. F.C.C., 290 F.3d 415, 415 (D.C. Cir. 2002) (holding that the FCC should not have adopted a uniform national unbundling rule without first considering the relevance of competition in broadband services coming from cable and satellite providers in any particular market); Drucker, *supra* note 304, at B1 (noting that recent court decisions unfavorable to ISPs have encouraged other ISPs to offer wireless broadband alternatives).

309. *See U.S. Telecomm. Ass'n*, 290 F.3d at 429 (rejecting FCC's reliance on "the letter of the [1996 Act]," because letter of statute did not adequately reflect court's view of need to limit unbundling rules to avoid creating "disincentives to research and development" by network owners, "the tangled management inherent in shared use of a common resource").

310. 47 U.S.C. § 251(c)(3) (2000); *see id.* § 251(d)(1) (mandating that the FCC implement regulations granting competing telecommunications providers nondiscriminatory access to the networks of incumbent providers).

311. *Id.* § 251(d)(2)(B).

312. In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996: Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, Report and Order, 11 F.C.C.R. 15499, 15642 (1996).

313. *See U.S. Telecomm. Ass'n*, 290 F.3d at 429 (supporting its conclusion that the FCC had exceeded its authority, the D.C. Circuit relied upon the holding of the Supreme Court in a previous case that the FCC's mandate to open up the Baby Bell's telephone networks to competitors must be subject to "some limiting standard, rationally related to the goals of the [1996] Act." (quoting AT&T Corp. v. Iowa Util. Bd., 525 U.S. 366, 388 (1999))); *id.* (noting that the Supreme Court had indicated that the FCC could not lawfully "blind itself" to the availability of network

companies have faced high barriers to entry in the broadband market, because the telephone companies have reinforced their locally dominant positions.[314]

The FCC has also liberated the Baby Bells from the constraints imposed by "common carrier regulation" under the 1996 Act.[315] Such regulation has a long history under U.S. law, dating to the imposition of heightened common-law standards of care and related duties of nondiscrimination and reasonable pricing on inns, railroads, ferries, and other common callings or carriers, due to public policy concerns.[316] Courts expanded common carrier rules to telephone and telegraph companies in the 1800s, finding them to be "charged with a duty which concerns the public interest."[317] In 1894, the Supreme Court held that telegraph companies were "common carriers" that, like the railroads, were "bound to serve all customers

infrastructure, other than that owned by the Baby Bells, which independent telecommunications firms could use (quoting *Iowa Util. Board*, 525 U.S. at 389)).

314. *See* Aaron M. Wigod, Comment, *The AOL-Time Warner Merger: An Analysis of the Broadband Internet Access Market*, 6 J. SMALL & EMERGING BUS. L. 349, 383 (2002) (arguing that because telephone networks resist "open access" to DSL capacity by competing broadband providers, these providers find it difficult to compete); Andy Dornan, *DSL: Deregulated to Death*, IT ARCHITECT, Sept. 1, 2005, at 20 (describing how it is "already impossible for independent DSL providers to compete on price in most areas" where Baby Bells are dominant).

315. *See* Rob Frieden, *The FCC's Name Game: How Shifting Regulatory Classifications Affect Competition*, 19 BERKELEY TECH. L.J. 1275, 1276-77 (2004) (discussing the FCC's policy shift from classifying telephone company provided broadband access as a regulated "telecommunications service," to reclassifying these companies as "information service" providers, thereby freeing such companies of traditional regulations).

316. *See* An Act to Regulate Commerce, 24 Stat. 379-80 (1887) (providing that all charges for transportation of passengers or by railroad "shall be reasonable and just," and prohibiting any "undue or unreasonable preference or advantage to any particular person, company, firm, corporation, or locality, or any particular description of traffic"); Munn v. Illinois, 94 U.S. 113, 125 (1876) ("[I]t has been customary in England from time immemorial, and in this country from its first colonization, to regulate ferries, common carriers, . . . wharfingers, innkeepers, & c., and in so doing to fix a maximum charge to be made . . . ."); R.R. Co. v. Lockwood, 84 U.S. 357, 359-60 (1873) (noting that railroads are common carriers whose operations have public interest implications); James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J. 225, 253-64 (2002) (tracing history of common carrier regulation to English common law).

317. *See* Primrose v. W. Union Tel. Co., 154 U.S. 1, 18 (1894) (holding that telegraphs, like railroads, owe a duty of nondiscrimination in service due to public policy implications of common carrier status); *see also* W. Union Tel. Co. v. Call Publ'g Co., 181 U.S. 92, 99-100 (1901) (finding that telegraphs, as common carriers, "are performing a public service," so that "all individuals have equal rights both in respect to service and charges"); Hockett v. State, 5 N.E. 178, 182 (Ind. 1886) (holding that because telephone service is "a matter of public convenience and of public necessity, . . . [a]ll the instruments and appliances used by a telephone company in the prosecution of its business are consequently, in legal contemplation, devoted to a public use"); Speta, *supra* note 316, at 261-62 (describing development of case law treating telegraph providers as common carriers).

alike, without discrimination."[318] Congress extended common carrier regulation to the telephone companies in 1910, with the Mann-Elkins Act, and reaffirmed common carrier regulation of telecommunications by wire, radio, or energy in the 1934 Act.[319]

The 1996 Act, in turn, imposed common carrier regulation on providers of "telecommunications" services, but not on providers of "information" services, such as electronic publishing.[320] Congress defined a "telecommunications service" as the "offering of telecommunications for a fee directly to the public, . . . regardless of the facilities used."[321] In contrast, it defined an "information service" as "electronic publishing" or other offerings of "information via telecommunications," but specifically excluded "any use of any such capability for the . . . operation of a telecommunications system or the management of a telecommunications service."[322] "Electronic publishing" is a very distinctive category from telecommunications, for it "includes disseminating news articles, offering literary material, and providing services similar to the Lexis/Nexis and Westlaw databases."[323]

318. *Primrose*, 154 U.S. at 14.

319. *See* An Act to Provide for the Regulation of Interstate and Foreign Communication by Wire or Radio, and for other Purposes, § 3(h), 48 Stat. 1064, 1066 (1934) (defining "common carrier" as "any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or interstate or foreign radio transmission of energy"); *id.* § 201(a), 48 Stat. at 1070 (imposing "duty" on "every common carrier engaged in interstate or foreign communication by wire or radio to furnish such communication service upon reasonable request therefore"); *id.* § 202(a), 48 Stat. at 1070 (making it "unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, . . . or services . . . , or to make or give any undue or unreasonable preference or advantage to any particular person . . . ."); *id.* § 203, 48 Stat. at 1070-71 (imposing price regulation scheme on common carriers); MCI Telecomm. Corp. v. AT&T Co., 512 U.S. 218, 220, 234 (1994) (finding that the 1934 Act authorized the FCC "to regulate the rates charged for communication services to ensure that they were reasonable and nondiscriminatory," creating a "rate-regulation, filed-tariff system for common-carrier communications"); Speta, *supra* note 316, at 262 ("The Mann-Elkins Act . . . declared telephone and telegraph companies to be common carriers and subjected those companies to the Act's just and reasonable rates and nondiscrimination requirements . . . ."); Antonia M. Apps & Thomas M. Dailey, *Non-Regulation of Advanced Internet Services*, 8 GEO. MASON L. REV. 681, 684 n.12 (2000) (explaining that the Interstate Commerce Commission, initially created to regulate railroads to ensure "just and reasonable" rates, regulated AT&T and the telephone industry after 1910).

320. *See* Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., 125 S. Ct. 2688, 2696-97, 162 L. Ed. 2d 820, 834-35 (2005) (discussing the differing regulatory schemes that the 1996 Act imposes upon telecommunications carriers and information-service providers).

321. 47 U.S.C. § 153(46) (2000).

322. *Id.* § 153(20) (2000).

323. BellSouth Corp. v. FCC, 144 F.3d 58, 60 (D.C. Cir. 1998).

To exempt the Baby Bells from "common carrier" regulation of their DSL networks, the FCC had to find that broadband service delivered over the telephone lines constitutes "information" rather than "telecommunications."[324] This finding rested on a line of reasoning that led to surprising conclusions. First, the FCC stressed that "an entity provides telecommunications only when it both provides a transparent transmission path and it does not change the form or content of the information."[325] This premise is based on the 1996 Act's definition of the term "telecommunications" so as to exclude services such as electronic publishing, which involve the "transmission" of "information" along with a "change in the form or content of the information as sent and received."[326] Second, the FCC claimed that DSL broadband permits users to change the form or content of the information they transmit over the Internet, such as "'home pages' on the World Wide Web."[327] Third, the FCC decided not to categorize DSL broadband as a telecommunications service to the extent that it transmits data unaltered, but as an information service to the extent that it facilitates changes in the content of data.[328] The FCC maintained one of its previous rulings establishing the principle that telecommunications and information services are "mutually exclusive" and cannot coexist.[329] This prior ruling drew support from legislative history declaring that telecommunications services do not include information services and vice versa.[330]

Finally, the FCC reached the paradoxical conclusion that DSL broadband involves "telecommunications," i.e. the "transmission . . . of . . . wireline Internet access service," but is not a

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324. *See Brand X*, 125 S. Ct. at 2711, 162 L. Ed. 2d at 851 (The FCC "has tentatively concluded that DSL service provided by facilities-based telephone companies should also be classified solely as an information service").

325. In the Matter of Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities: Universal Service Obligations of Broadband Providers, Notice of Proposed Rulemaking, 17 F.C.C.R. 3019, 3030 (2002) [hereinafter Appropriate Framework for Broadband Access].

326. *Id.* (citing 47 U.S.C. § 153(43) (2000)).

327. *Id.* at 3031.

328. *See id.* (concluding that Congress intended to define "information service" so as to include the capability of transferring data that is altered in form or content, such as that which is provided by broadband Internet access services).

329. *Id.*; *see also id.* at 3027-28 (citing In the Matter of Federal-State Joint Board on Universal Service, 13 F.C.C.R. 11501 (1998)) (reiterating the FCC's conclusions from its 1998 *Report to Congress* on universal service).

330. *See* In the Matter of Federal-State Joint Board on Universal Service, 13 F.C.C.R. 11501, 11523 (1998) ("The Senate Report stated in unambiguous terms that its definition of telecommunications 'excludes those services . . . that are defined as information services.' Information service providers, the Report explained, 'do not "provide" telecommunications services; they are users of telecommunications services.'" (citing S. REP. NO. 104-23, at 18, 28 (1995))) (footnotes omitted).

"'telecommunications service.'"[331] In other words, DSL "does not offer 'telecommunications' to anyone, it merely uses telecommunications to provide end-users with wireline broadband Internet access . . . ."[332] Thus, the FCC elected to treat DSL broadband providers like electronic publishers or authors of Web pages, which for the most part they are not, rather than like owners of a telecommunications network used to transmit Internet data over wires, which they are.

The cable broadband market joined the DSL market on the path to deregulation in 2002, when the FCC decided that cable modem service is an "information service" and not a "telecommunications service."[333] The FCC's reasoning here was nearly identical to its reasoning in the DSL context in that the crux of the matter is that a cable broadband provider "is not offering telecommunications service to the end user, but rather is merely using telecommunications to provide end users with cable modem service."[334] The FCC also relied upon the fact that cable broadband providers sometimes offer "computer interactivity" services that go beyond the mere "transmission of data," such as e-mail, newsgroups, Web hosting, and the domain name system, even though not all "subscribers use . . . e-mail or web-hosting," and even though not "every cable modem service provider offers" them at all.[335] The classification of cable broadband as an "information service" meant that cable broadband providers would not be regulated as common carriers or cable service providers.[336] Instead, they would be regulated with a very light touch "under the less stringent provisions" governing Web sites and other "information service[s]."[337]

The FCC's decision to deregulate the cable broadband industry, based on a determination that cable modems did not deliver a telecommunications service but rather merely "information," naturally surprised many courts, legislators, regulators, market

331. *Appropriate Framework for Broadband Access*, *supra* note 325, at 3033.
332. *Id.*
333. HIGH-SPEED ACCESS INQUIRY 2002, *supra* note 1, at 4802.
334. *Id.* at 4824; *see also* Amy Schatz, Jesse Drucker & Dionne Searcey, *High Court to Old Media: You Win*, WALL ST. J., June 28, 2005, at B1 (predicting that the FCC's "hands off" approach will result in less choice and increased cost for consumers of high-speed Internet services).
335. HIGH-SPEED ACCESS INQUIRY 2002, *supra* note 1, at 4822-23.
336. *See* 47 U.S.C. § 521 (2000) (outlining cable service provider regulatory scheme); *id.* § 201 (outlining common carrier regulatory scheme).
337. Brand X Internet Serv. v. FCC, 345 F.3d 1120, 1126 (9th Cir. 2003) (citing 47 U.S.C. § 151 (2000)), *rev'd*, 125 S. Ct. 2688 (2005).

participants, and commentators.[338] Because the words "broadband" and "Internet" did not appear anywhere in the 1996 Act's definitions, it seemed clear that Congress had intended the term "telecommunications service" to encompass new technologies for communications at a distance, of which cable broadband unquestionably is one.[339] Based on the 1996 Act's definitions of "information" and "telecommunications," the Ninth Circuit held in 2000 that cable modem service is a "telecommunications service" because it "controls all of the transmission facilities between its subscribers and the Internet."[340]

A broad coalition of public and private entities brought several challenges to the FCC's decision to deregulate cable broadband, which were consolidated in the Ninth Circuit by judicial lottery.[341] Leading the charge were independent broadband ISPs Brand X

338. *See, e.g.*, HIGH-SPEED ACCESS INQUIRY 2002, *supra* note 1, at 4872 (dissenting statement of Commissioner Michael J. Copps) ("Today we take a gigantic leap down the road of removing core communications services from the statutory frameworks established by Congress, substituting our own judgment for that of Congress and playing a game of regulatory musical chairs by moving technologies and services from one statutory definition to another."); Christopher Stern, *FCC Gives Cable Firms Net Rights*, WASH. POST, Mar. 15, 2002, at E01 (reporting that Representative Edward Markey, key framer of 1996 Act, characterized FCC's decision as "extraordinary regulatory activism as the FCC rewrites the words of Congress to return to pre-1996 regulatory classifications").

339. The cable companies and Baby Bells themselves made clear to Congress and the FCC that cable was a technology for providing data "communications" services over a wire. *See, e.g.*, *Telecommunications Policy Reform: Hearings Before the S. Comm. on Commerce, Sci., and Transp.*, 104th Cong. 2 (1995) (statement of Decker Anstrom, President, National Cable Television Association) ("Already several leading cable companies are building state-of-the-art communications facilities that deliver voice, video and data over the same wire."), *quoted in* Brief for Respondents Earthlink, Inc., Brand X Internet Serv., and Center for Digital Democracy at 34 n.10, Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281); Comments of Verizon Commun., FCC GN Docket No. 00-185, at 10-11 (Dec. 1, 2000) (footnotes omitted) ("Cable operators are . . . offering for a fee to the public a service that transmits 'information of the user's choosing, without change in the form or content of the information as sent and received' 'between or among points specified by the user'—in other words, a telecommunications service. This conclusion is the only one that can be squared with the Act and the Commission's precedents."), *quoted in* Brief for Respondents Earthlink, Inc., Brand X Internet Serv., and Ctr. for Digital Democracy at 19-20, Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281).

340. AT&T Corp. v. City of Portland, 216 F.3d 871, 877-78 (9th Cir. 2000); *accord* MediaOne Group, Inc. v. County of Henrico, 257 F.3d 356, 364 (4th Cir. 2001) ("[A]lthough MediaOne maintains a 'cable system,' its facilities can be properly classified as telecommunications facilities when they provide a transmission path to the Internet.").

341. *See Brand X*, 345 F.3d at 1127 (noting that seven different petitions for review of the FCC's ruling, filed in three different federal circuits, were consolidated by the Judicial Panel of Multidistrict Litigation on Apr. 1, 2002); *Brand X*, 125 S. Ct. at 2698, 162 L. Ed. 2d at 836-37.

Internet Services and Earthlink; joining them were the State of California, the Consumer Federation of America, the National League of Cities, the U.S. Conference of Mayors, and the National Association of Counties, among other associations representing primarily local governments.[342] By the time the case got to the Supreme Court, MCI, the State of New Jersey, the American Civil Liberties Union, the Brennan Center for Justice, and the American Association of Retired Persons had lined up on the side of the challenge.[343]

The Ninth Circuit held that the FCC's determination that cable broadband is an "information service" was erroneous.[344] The court pointed out that cable broadband providers are the telecommunications "'pipeline," which "controls all of the transmission facilities between its subscribers and the Internet."[345] A dial-up ISP such as America Online, by contrast, permits users to connect over telephone lines owned by entities other than the ISP, which entities are properly considered telecommunications services.[346]

The Supreme Court reversed the Ninth Circuit, and held that cable broadband is an information service.[347] The Court reasoned that

342. *Brand X*, 345 F.3d at 1127 & nn.10, 12.

343. *See* Brief for MCI, Inc. as Amici Curiae Supporting Respondents, *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv.*, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281), *available at* http://www.abanet.org/publiced/preview/briefs/pdfs_04-05/04-277&04-281MCIResp.pdf (arguing that the Ninth Circuit's decision should be affirmed because the Commission's interpretation of "telecommunications service" and "information service" is inconsistent with Congressional requirements set forth in the 1996 amendments to the Communications Act); Brief for the State of New Jersey, Board of Pub. Util. Comm'n as Amicus Curiae Supporting Respondents, *Brand X*, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281), *available at* http://cyberlaw.stanford.edu/about/cases/NJ%20Amicus%20Brief.pdf (arguing that the Ninth Circuit's decision should be affirmed because that decision was based on a proper reading of the Communications Act and upon precedent); Brief of the ACLU and Brennan Ctr. for Justice, *supra* note 64 (arguing that the FCC's classification of cable broadband as purely an "information service" violated its legal mandate); Brief of AARP, Free Press and Nat'l Internet Alliance as Amici Curiae Supporting Respondents, *Brand X*, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281), *available at* http://cyberlaw.stanford.edu/about/cases/BrandX%201.pdf (arguing that the FCC's categorization of cable broadband as purely an "information service" threatens competition within the Internet service provider industry and reduces choice among ISP consumers).

344. *See Brand X*, 345 F.3d at 1132 (finding that broadband service is part "telecommunications service").

345. *Id.* at 1129 (internal quotation marks omitted) (quoting *AT&T Corp. v. City of Portland*, 216 F.3d 871, 877-78 (9th Cir. 2000)).

346. *Id.* at 1128-29.

347. *See* Nat'l Cable & Telecomm. v. Brand X Internet Serv., 125 S. Ct. 2688, 2710-12, 162 L. Ed. 2d 820, 850-52 (2005) (concluding that the FCC's construction of

consumers use cable broadband to transmit data over the wires only in connection with "the information-processing capabilities provided by Internet access, and because the transmission is a necessary component of Internet access."[348] Surfing the Web over a cable modem, the Court declared, requires the cable company to grant the surfer access to the domain name system, which fits the statutory definition of an "information service" as a "'capability for . . . acquiring . . . retrieving, utilizing, or making available' Web site addresses."[349] The Court added that because Congress intended to exempt electronic publishers such as LexisNexis and Dow Jones News from common carrier regulation, it could also have intended to exempt cable broadband providers even though they "use telecommunications as an input to provide information service to the public."[350]

Soon after *Brand X* was decided, the Chairman of the FCC declared that it set forth a "'framework for broadband that can be applied to all providers,'" including DSL delivered by the Baby Bells.[351] The FCC would "'move quickly to establish regulatory parity between telephone companies and cable companies that are providing a broadband service,'" the Chairman promised.[352] In August 2005, the FCC issued a ruling that categorized DSL broadband as an information service.[353]

The Supreme Court's ruling in *Brand X* places the impetus on Congress to clarify and rationalize the 1996 Act's framework for telecommunications competition.[354] Specifically, Congress should clearly demarcate between the provision of the "pipeline" or "facilities" used to connect subscribers' homes to the Internet, and the provision of data storage and generation capacity such as Web

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cable broadband as an "information service" was a reasonable statutory interpretation).

348. *Id.* at 2703, 162 L. Ed. 2d at 842.

349. *Id.* at 2709-10, 162 L. Ed. 2d at 849 (quoting 47 U.S.C. § 153(20) (2000)).

350. *Id.* at 2707, 162 L. Ed. 2d at 846.

351. Jon Van, *Web Service Price War Seen Despite Ruling*, CHI. TRIB., June 30, 2005, at C1.

352. Amy Schatz, *FCC to Seek Parity After Net Ruling; Push to Let Phone Firms Keep Exclusive Line Access Planned After Cable Decision*, WALL ST. J., June 29, 2005, at B9.

353. *See* In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, Report and Order and Notice of Proposed Rulemaking, 20 F.C.C.R. 14853 (2005) (summarizing the conclusions of § IV of the FCC's Aug. 5, 2005 *Report and Order and Notice of Proposed Rulemaking*).

354. *See Brand X*, 125 S. Ct. at 2690-91, 162 L. Ed. 2d at 820-22 (affirming the lawfulness of the FCC's interpretation, under the 1996 Act, that broadband cable modem service is an "information service," not a "telecommunications service"; and emphasizing the deference that the federal courts owe to the FCC's interpretation of ambiguous statutes).

hosting and e-mail server space.[355] The former is a telecommunications service which must be governed by common carrier regulation to prevent monopolistic and oligopolistic exploitation to the detriment of consumers.[356] The latter is an information service more akin to electronic publishing, for which monopolistic control over a network bottleneck is not an urgent concern.[357] The domain name system, which is necessary to route Web surfers to the correct destination, presents something of a middle ground between these two categories. It provides no basis for characterizing cable broadband service, as a whole, as merely an information service, however, when it is principally used for the "'management, control, or operation of a telecommunications system or the management of a telecommunications service.'"[358] From the consumer's perspective (which Congress intended to address in enacting the 1996 Act, as its preamble indicates),[359] cable broadband service is just as much a purchase of a "physical transmission pathway to the Internet" as is dial-up access or broadband DSL.[360]

The weakening of private competition based on open access rules makes municipal broadband an even more important counterweight to broadband monopolies and duopolies, and makes state action to impede municipal entry that much more anticompetitive.[361] The

355. *See id.* at 2715, 162 L. Ed. 2d at 855 (Scalia, J., joined by Souter, J., and Ginsburg, J., dissenting) ("In the case of Internet access, the end user utilizes two different and distinct services. One is the transmission pathway, a telecommunications service that the end user purchases from the telephone company . . . . [This] is a regulated telecommunications service . . . .") (citation omitted).

356. As Justices Scalia, Souter, and Ginsburg pointed out in dissent, it is absurd to recognize that cable broadband provides high-speed Internet access over cable wires, but then deny that "cable companies 'offer' high-speed access to the Internet," as the FCC and majority did in *Brand X*. *Id.* at 2713, 162 L. Ed. 2d at 853.

357. *See id.* at 2703, 162 L. Ed. 2d at 841 (stating that the Communications Act defines "information service" as the offering of information storage or generation capability; and acknowledging that the issue of storage and generation is not challenged in this action).

358. *Id.* at 2717 n.6, 162 L. Ed. 2d at 858 n.6 (quoting 47 U.S.C. § 153(20) (2000)); *see also* In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, Report and Order, 13 F.C.C.R. 24,011, 24,030-31 (1998) (stating that a provider of DSL broadband offers a telecommunications service even when it also offers information services as well).

359. *See* Preamble, Telecommunications Act of 1996, *supra* note 153 (outlining the Act's goal of promoting lower prices and better services for the American consumer).

360. *See Brand X*, 125 S. Ct. at 2714-15, 162 L. Ed. 2d at 855 (Scalia, J., joined by Souter, J., and Ginsburg, J., dissenting) (declaring that the telecommunications aspect of cable broadband service is sufficiently independent to justify its characterization as an offer of an independent service, not a combination of services).

361. Catherine Yang, *Good for Cable, Bad for America*, BUS. WEEK ONLINE, June 28, 2005, http://www.businessweek.com/technology/content/jun2005/tc200506289131 tc120.htm ("Instead of fostering stiff competition that leads to the low prices and

power vested by the FCC in the cable and telephone companies to exclude upstart competitors could frustrate universal broadband access by raising prices and decreasing innovation and output.[362] If independent broadband providers are precluded from effectively challenging the broadband duopoly enjoyed by the cable and DSL providers, the price of broadband will increase, or decrease at a slower rate, and fewer Americans will subscribe as a result.[363] And if consumers can be restrained from leaving a broadband ISP that restricts their freedom of Internet choice, content diversity and technological innovation will suffer.[364]

With the sweeping deregulation of the private broadband industry wrought by *Trinko* and *Brand X*, the role of municipal governments and utilities in making high-speed Internet access a service that most Americans use becomes critical.[365] Congress had intended the "open access requirements" of the 1996 Act to "ensure that all competitors will have a way to deliver goods and services to anyone anywhere on the information superhighway."[366] The 1996 Act reflected Congress' belief that "universal service will be achieved by nondiscriminatory access to telecommunications services."[367] Without the open access regulations intended to achieve universal service, the risk is that some

innovation that lure consumers, the U.S. is allowing the huge cable and phone companies to shut out competitors that provide services—Internet, phone, or TV—delivered via those broadband networks.").

362. *See* Dornan, *supra* note 314, at 20 (arguing that the FCC's policies towards large telecommunications companies are reinforcing their power and will very likely lead to increases in prices and a reduction in choices for the American broadband consumer).

363. *See* Schatz, Drucker & Searney, *supra* note 334, at B1 (contending that the Supreme Court's *Brand X* decision will have an adverse impact on telecommunication competition, which will precipitate an increase in prices and a limitation of options for broadband consumers).

364. Yang, *supra* note 361; Ben Scott, Network Neutrality & The Communications, Consumer's Choice, and Broadband Deployment Act of 2006, Prepared Statement of Free Press, Consumers Union, Consumer Federation of America before the United States Senate Committee on Commerce, Science and Transportation (May 25, 2006), http://commerce.senate.gov/public/_files/scott052506.pdf ("College kids created Google. A hobbyist conceived the idea for eBay. A teenager wrote the code for Instant Messaging. Some of the most popular sites on the Internet today—MySpace, FaceBook, and YouTube—did not exist three years ago. This technological revolution keeps turning because the Internet is an unrestricted free marketplace of ideas where innovators rise and fall on their merits. The laws that protect this free market are network neutrality rules. Without the rules, innovators are at the mercy of the network owners to say who can and cannot succeed.").

365. *See* Yang, *supra* note 361 (opining that due to Supreme Court's repeal of broadband open access rules under 1996 Act, "U.S. consumers may end up with only the menus [of Web access, phone, and TV services] offered by their local phone and cable companies.").

366. 141 CONG. REC. S7907 (daily ed. June 7, 1995) (statement of Sen. Lott).

367. Brief for the Resp'ts States and Consumer Groups at 28-29, Nat'l Cable & Telecomm. Ass'n, 125 S. Ct. 2688, 162 L. Ed. 2d 820 (2005) (Nos. 04-277 & 04-281).

Americans may not "benefit[] from the power of the Information Age."[368] Even if Congress refuses to revive open access rules, however, municipal broadband networks can help consumers escape broadband monopolies or duopolies that charge exorbitant prices and suppress Internet innovation.

III. ALL LEGAL PROHIBITIONS ON MUNICIPAL BROADBAND SHOULD BE LIFTED

A. Proposed Federal Legislation on Municipal Broadband

Federal and state laws outlawing municipal entry present a stark conflict with the policy of universal access to broadband that the federal government and the federal telecommunications laws have adopted.[369] While private telecommunications companies have a legitimate interest in fair competition with municipal broadband projects, and in recovering their investment in broadband infrastructure along with a reasonable profit, this interest is overprotected by outlawing municipal broadband.[370] Congress can assure adequate protection of private property and investments by permitting states to enact legislation that requires municipal telecommunications providers to obey all applicable laws governing delivery of broadband services, and prohibits the use of eminent domain to seize private telecommunications infrastructure for conversion to municipal networks.

In May 2005, a Texas congressman introduced the Preserving Innovation in Telecom Act of 2005, federal legislation that "imposes a nationwide prohibition on municipally-sponsored networks."[371]

368. H.R. REP. No. 104-458, at 133 (1996) (Conf. Rep.).

369. *See* Preamble, Telecommunications Act of 1996, *supra* note 153 (declaring its objectives of promoting competition and reducing federal regulation so as to foster rapid deployment of new telecommunications technologies for consumers).

370. *Cf.* Sen. Frank R. Lautenberg (D-N.J.), *Open the Doors to Broadband Access; Don't Slam Them Shut*, THE HILL, July 13, 2005, at 30 (arguing for legislation restricting states from outlawing municipal broadband, but stipulating that "when a municipality does become a provider it can't abuse its authority to discriminate against private competitors"); *In re* Mo. Mun. League, 16 F.C.C.R. 1157, 1163 (2001) (recognizing that concerns about "possible regulatory bias" by municipalities entering telecommunications markets could be resolved "successfully" by various ways short of "an outright ban on entry").

371. *Texas Congressman Seeks Ban on Municipal Wi-Fi Networks*, EE TIMES, June 3, 2005, http://www.eet.com/news/latest/showArticle.jhtml?articleID=164300255. A Baby Bell formerly employed the congressman who introduced the legislation and gave him more than $10,000 in campaign contributions during the 2003/2004 election cycle. *See id.* (reporting that Rep. Pete Sessions (R-TX), who introduced the Preserving Innovation in Telecom Act of 2005, was previously employed by Southwestern Bell); Dwight Silverman, *SW Bell's Internet Link Debuts*, HOUSTON

Specifically, the bill purports to "prohibit municipal governments from offering telecommunications, information, or cable services except to remedy market failures by private enterprise to provide such services."[372] The law would ban any state or local government, or affiliated private entity, from offering telecommunications or information services substantially similar to those being provided by a corporation or other private entity in the same "geographic area."[373] An exception to this ban would exist for any state or local government providing such service prior to the date of enactment of the Act.[374]

In response to the proposed federal ban on municipal broadband, Senator John McCain introduced the Community Broadband Act of 2005 ("CBA"), which would guarantee greater competition in broadband markets by facilitating municipal entry.[375] The CBA, which was incorporated into the Advanced Telecommunications and Opportunity Reform Act of 2006, provides that states shall not prohibit any public provider from offering broadband or other advanced telecommunications capabilities.[376]

CHRON., Oct. 1, 1996, http://www.chron.com/content/chronicle/business/96/10/02/swbell.html (describing debut of Southwestern Bell Internet Services as subsidiary of Southwestern Bell, a Baby Bell); The Center for Responsive Politics, *2003-04 Congressional PAC Contributions Sessions, Pete (R-TX)* (May 16, 2005), http://www.opensecrets.org/pacs/memberprofile.asp?cid=N00005681&cycle=2004&expand=B08 (noting that the Federal Election Commission records show that in the 2003/2004 election cycle, Rep. Sessions received $10,000 in contributions to his Political Action Committee from SBC Communications as well as $9,000 from Verizon Communications).

372. H.R. 2726, 109th Cong. Preamble (2005).

373. *Id.* § 2(g)(1).

374. *Id.* § 2(g)(2).

375. *See* 151 CONG. REC. S7298-99 (daily ed. June 23, 2005) (statement of Sen. McCain) (stating the CBA gives incumbent providers an incentive to enter new rural areas, and contains no limits on their ability to compete with municipalities offering high-speed Internet access to their citizens).

376. *Compare* Community Broadband Act, S. 1294, 109th Cong. § 2(1)(c)(1) (2005) ("No State statute, regulation, or other State legal requirement may prohibit or have the effect of prohibiting any public provider from providing, to any person or any public or private entity, advanced telecommunications capability or any service that utilizes the advanced telecommunications capability provided by such provider."), *with* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(c) (2006) ("No State or local government statute, regulation, or other State or local government legal requirement may prohibit or have the effect of prohibiting any public provider from providing, to any person or any public or private entity, advanced communications capability or any service that utilizes the advanced communications capability provided by such provider."). The CBA was folded into a much larger telecommunications reform bill. *See* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. (2006), http://www.govtrack. us/congress/bill.xpd?bill=s109-2686 (indicating that Community Broadband Act of 2005 was folded into broader legislation); Library of Congress, *Bill Summary and Status for the 109th Congress S. 2686* (2006), at http://thomas.loc.gov/cgi-bin/bdquery/z?d109:SN 02686:@@@T

Rather than passing federal legislation restricting municipal broadband, such as the Preserving Innovation in Telecom Act of 2005, Congress should enact the CBA or a similar provision, and embrace a level playing field for municipal broadband as a competitor in markets currently dominated by local monopolies and duopolies. While preempting state law bans on municipal broadband and Wi-Fi service, a law like the CBA would permit state law regulation of public broadband providers on terms generally applicable to all other providers of broadband service, and prohibit discriminatory regulation of private providers on terms not applicable to public ones.[377] As Intel, a prominent Wi-Fi equipment provider, argues, the CBA "strikes an appropriate balance between preempting state prohibitions on the municipalities that provide broadband service and requiring municipalities to operate in a competitively neutral manner under open, transparent processes."[378]

(similar). The broader bill, which was renamed the Advanced Telecommunications and Opportunity Reform Act of 2006, see *infra* note 39, imposes additional provisions granting a right of first refusal to any private provider able and willing to establish an "equivalent advanced communications capability of the same scope for the same or lower cost to consumers," and requires both open bidding processes for all public-private partnerships, and a notice and thirty-day opportunity for commercial enterprises to bid for the rights to provide services in the same coverage area at identical service tiers and pricing. Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(e)-(f) (2006). The House of Representatives has already passed a similar bill, which omits the right of first refusal and prevention of unfair public competition provisions of the Senate bill. The House bill, however is somewhat more restrictive of municipal broadband in that it goes beyond prohibiting discrimination or closed access to municipal broadband facilities, see *id.* § 502(d), to also impose a requirement that states and municipalities do not "grant any preference or advantage to any [broadband] provider" that they own or control. Communications Opportunity, Promotion, and Enhancement Act of 2006, H.R. 5252, 109th Cong., § 401(b) (2006).

377. *See* Community Broadband Act, S. 1294, 109th Cong. § 2(1)(c)(2)-(3) (2005) (forbidding regulations enacted by public providers from discriminating in favor of themselves or any providers they own). The Communications, Consumer's Choice, and Broadband Deployment Act of 2006 imposes a similar antidiscrimination requirement, which extends to all "laws and regulations," "ordinances[,] . . . rules and policies, including those relating to the use of public rights-of-way, permitting, performance bonding and reporting," and supplements it with an open access provision mandating that to the extent consistent with public safety, private providers be allowed to "place similar facilities in the same conduit, trenches, and locations as the public provider for concurrent or future use under the same conditions as the public provider." Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(d)(1)-(3) (2006). The House of Representatives has passed a bill that would not only prohibit discrimination or noncompliance by public providers with generally applicable law and regulations, but also requires that states and municipalities do not "grant any preference or advantage to any [broadband] provider" that they own or control. Communications Opportunity, Promotion, and Enhancement Act of 2006, H.R. 5252, 109th Cong., § 401(b)-(c) (2006).

378. Intel Corp., *supra* note 17.

B. State Law Restraints on Municipal Broadband and Wi-Fi Projects

By 2004, about ten states had passed statutes that impeded municipal entry into broadband markets.[379] Since then, state legislators have proposed action to prohibit or restrict municipal broadband in at least fifteen states.[380] Legislation intended to block or delay many citywide broadband and Wi-Fi projects passed in 2005 in at least seven states: Colorado, Florida, Indiana, Louisiana, Michigan, Nebraska, and Tennessee.[381] With Florida and Michigan's action, four of the ten most populous U.S. states now significantly restrict municipal broadband networks.[382] The measures either languished in committee or expired without action in at least seven more states, including: Illinois, Iowa, Ohio, Oregon, Texas, Virginia, and West Virginia.[383]

Seven states currently have outright prohibitions on all or many municipalities providing high-speed Internet access to their residents. With certain exceptions, the law in Missouri, Nebraska, Tennessee, and Texas forbids most or all municipalities from providing telecommunications services.[384] Nevada law bars cities with

379. *See* Stephen Ursery, *Bans on Local Telecom Service Are Upheld*, AMERICAN CITY & COUNTY, May 1, 2004, at 16, 18, *available at* http://americancityandcounty.com (follow "May 1, 2004" drop down hyperlink; then follow "Bans on local telecom service are upheld" hyperlink) (discussing the impact of statutes enacted by several states).

380. *See* Baller Herbst Law Group, *Proposed State Barriers to Public Entry* (Jan. 24, 2006), http://www.baller.com/pdfs/baller_proposed_state_barriers.pdf (listing fourteen states that have proposed restrictive legislation); Neal Peirce, *City-Sponsored Wi-Fi's Wild Ride*, SEATTLE TIMES, Aug. 21, 2005, *available at* http://seattletimes.nwsource.com/html/opinion/2002446112_peirce21.html (referring to the introduction of bills blocking municipal Wi-Fi access in fourteen states); John Tanner, *The Great Municipal Wi-Fi Freakout: Will Proposed City Systems Help or Hinder the Private Sector?*, AMERICA'S NETWORK, Apr. 1, 2005, http://electronic.americasnetwork.com/040105/Page_19.asp (claiming restrictive legislation was pending in seventeen states); Carol Wilson, *Municipal Networks Gaining Ground*, TELEPHONY, Apr. 25, 2005, at 6, *available at* http://telephonyonline.com/mag/ (follow "telecom_municipal_networks_gain" hyperlink) (noting restrictions were proposed or passed in Pennsylvania, Florida, and Texas).

381. Baller Herbst Law Group, *supra* note 380, at 1-3, 5-7.

382. *See id.* at 3-4, 6, 8 (detailing enactments in Florida, Michigan, and Texas); Peirce, *supra* note 380 (describing restrictions imposed by the Pennsylvania Legislature).

383. *See* Baller Herbst Law Group, *supra* note 380 (outlining specific difficulties various legislatures encountered while attempting to enact barriers to public broadband entry).

384. *See* MO. ANN. STAT. § 392.410(7) (West 1994 & Supp. 2006) (excepting telecommunications for governmental functions such as emergency, medical, or educational services, as well as "Internet-type services"); NEB. REV. STAT. §§ 86-593-86-596 (2005) (barring municipalities and public power suppliers from offering retail or wholesale broadband or telecommunications services, excepting only certain services provided with authorization prior to 2005); NEB. REV. STAT. § 86-574 (2004) (defining dark fiber as "unused fiber optic cable through which no light is transmitted or any installed fiber optic cable not carrying a signal"); NEB. REV. STAT.

populations of 25,000 or more, and counties with populations of 50,000 or more, from selling telecommunications access to members of the public.[385] Virginia law prohibits municipal broadband projects except in those cities that operated electric utilities in 2002,[386] and outlaws subsidizing broadband in those cities with tax revenues and in many (perhaps most) circumstances other revenues.[387] Washington state law prohibits public utility districts from providing broadband Internet access to end users.[388]

Several other states may forbid municipalities from providing broadband Internet access as a public service simply by failing explicitly to authorize them to do so. In these states, which have adopted "Dillon's Rule," state constitutional, statutory, or common law provides that municipalities have only those powers expressly conveyed to them by the state government, or that are really necessary to carry out those express powers.[389] Dillon's Rule could

§ 86-575 (2004) (excepting services provided over dark fiber); TENN. CODE ANN. §§ 7-52-601-7-52-604 (2005) (establishing that no municipal broadband services may be offered except where the municipality also operates an electric plant pursuant to TENN. CODE ANN. § 7-52-401 and a referendum is held on the matter pursuant to TENN. CODE ANN. § 7-52-602 (2005)); TEX. UTIL. CODE ANN. §§ 54.201-54.202 (Vernon 2005) (originally codified at TEX. REV. CIV. STAT. ANN. art. 1446c-0, § 3.251(d) (1995)) (stating that a "municipality or municipal electric system may not offer for sale to the public" various regulated telecommunications services, including "a service offered either directly or indirectly through a telecommunications provider"); TEX. UTIL. CODE ANN. § 54.2025 (Vernon 2005) (excepting dark fiber).

385. NEV. REV. STAT. § 268.086.1(a) (2003); NEV. REV. STAT. § 710.147.1(a) (2003); Carlson, *supra* note 31, at 52 (citing NEV. REV. STAT. § 268.086.1(a) (2004) (originally enacted 1997)).

386. *See* VA. CODE ANN. § 15.2-2160(A) (Matthew Bender 2006) (establishing that any locality operating an electrical system prior to Mar. 1, 2002, may provide telecommunications and broadband services within any such locality).

387. *See* VA. CODE ANN. § 15.2-2160(D) (Matthew Bender 2006) (forbidding localities from cross-subsidizing broadband services with revenues from other sources, except in areas where no for-profit broadband or offer to provide it exists).

388. *See* WASH. REV. CODE ANN. 54.16.330 (West 2006) (authorizing public utility districts to provide wholesale broadband access to private broadband providers, but expressly prohibiting the public utility districts from selling to end users).

389. *See* Carlson, *supra* note 31, at 53-55 (citing Merriam v. Moody's Ex'rs, 25 Iowa 163, 170 (1868), and expounding that Dillon's Rule is a fundamental attribute of state sovereignty and can be applied by direct legislative action or indirect judicial fiat). Dillon's Rule is named after John Forest Dillon, a justice of the Iowa Supreme Court who invented it. *See Merriam*, 25 Iowa at 170-76; *see also* Manuela Albuquerque, *California and Dillon: The Times They Are A-Changing*, 25 HASTINGS CONST. L.Q. 187, 190 (1998) (describing John Dillon as "a judge and writer of a municipal law treatise who formulated the doctrine embodied in the rule"). Fifty years earlier, Chief Justice Marshall noted that local governments were "instruments" of state governments, "created" and "controllable" by state legislatures for their purposes. Dartmouth Coll. v. Woodward, 4 L. ed. 629, 659 (1819). Dillon's Rule went "dramatically" beyond this recognition of state governments' utilization of local governmental entities, and even "thwarted" it, by precluding local governments from acting in ways perhaps not unanticipated, but not specifically commanded, by the

potentially give rise to legal challenges to municipal broadband in several large states. Illinois, Florida, and Texas are Dillon's Rule jurisdictions, although Florida courts are divided on the issue and Illinois courts exempt a small minority of "home rule" cities and counties.[390] The New York courts have adopted Dillon's Rule, except as modified by the state's "Bill of rights for local governments."[391] California is also a Dillon's Rule state, at least as to counties and "general law cities."[392] In one case, a county that asserted the

state. David J. Barron, *The Promise of Cooley's City: Traces of Local Constitutionalism*, 147 U. PA. L. REV. 487, 508 (1999).

390. *See* Barry v. Garcia, 573 So. 2d 932, 937 (Fla. Dist. Ct. App. 1991) (reaffirming that Dillon's Rule governs statutory interpretation (citing Tampa v. Easton, 198 So. 753 (Fla. 1940))); Vill. of Wauconda v. Hutton, 684 N.E.2d 1364 (Ill. App. Ct. 1997) (striking down a local ordinance as inconsistent with legislative intent, but upholding the home rule principle that local ordinances may impose more rigorous restrictions than state regulations so long as they do not conflict); N. Ill. Home Builders Ass'n v. City of St. Charles, 697 N.E.2d 442 (Ill. App. Ct. 1988) (allowing City of St. Charles to pass utility ordinances as implicitly granted by legislature); Tex. River Barges v. City of San Antonio, 21 S.W.3d 347 (Tex. App. 2000) (upholding City of San Antonio's right to regulate navigable waterways under home rule as granted by legislative charter); *see also* Jesse J. Richardson et al., *Is Home Rule the Answer? Clarifying the Influence of Dillon's Rule on Growth Management*, BROOKINGS.COM, Jan. 2003, at 41-45, http://www.brookings.edu/es/urban/publications/dillonsrule.pdf (summarizing the application of Dillon's Rule to local authority in the states). *But see* City of Boca Raton v. State, 595 So. 2d 25 (Fla. 1992) (holding Dillon's Rule abrogated in Florida by Article VIII, section 2(b) of state constitution); County of Wabash v. Partee, 608 N.E.2d 674 (Ill. App. 1993) (finding Dillon's Rule abrogated in very limited circumstances by § 10 of art. VII of state constitution).

391. *See* N.Y. CONST. art. IX, § 1 (enumerating rights, powers, privileges, and immunities of local governments). The "Bill of rights for local governments" provides that local powers shall be liberally construed, not strictly construed as under Dillon's Rule. *See also* Richardson et al., *supra* note 390, at 44 (interpreting N.Y. Const. art. IX, § 3(c) as an express repudiation of Dillon's Rule as applied to powers granted to local governments under the same article). *Compare* N.Y. CONST. art. IX, § 3(c) (expressing legislative desire for the courts to construe art. IX liberally), *with Merriam*, 25 Iowa at 170 ("any fair doubt as to the existence of a power is resolved by the courts against the [municipality]–against the existence of the power"), *and* Pesticide Pub. Policy Found. v. Wauconda, 1510 N.E.2d 858, 860-62 (Ill. 1987) (noting that under Dillon's Rule, powers of municipality are strictly construed).

392. *See* Irwin v. City of Manhattan Beach, 415 P.2d 769, 773 (Cal. 1966) (reiterating general law that cities only have those powers expressly conferred upon it by the state legislature or necessarily incident to the declared object of the municipal corporation); County of Marin v. Super. Ct. of Marin County, 349 P.2d 526, 530 (Cal. 1960) (characterizing counties as mere political agents of the state, authorized only to exercise powers granted by the state); County of Modoc v. Spencer & Raker, 37 P. 483, 483 (Cal. 1894) (denying Modoc County the authority to employ outside counsel to assist in criminal prosecutions without express consent of the state legislature); G.L. Mezzetta, Inc. v. City of Am. Canyon, 93 Cal. Rptr. 2d 292, 295 (Cal. Ct. App. 2000) (limiting powers of general law cities only to those which the legislature expressly confer upon it, or are essential to the object or purpose of the municipal corporation); Albuquerque, *supra* note 389, at 190 (explaining the constitutional powers of California cities to override general state laws that conflict with municipal affairs); Richardson et al., *supra* note 390, at 41 (differentiating charter cities which enjoy broad home rule powers from counties and general law cities which are subject to Dillon's Rule).

authority to rebroadcast television signals as a "public service" was rebuffed by a state appellate court, which held that the California Constitution grants a county only such powers as are expressly granted by the state constitution or statutes, or that arise by necessary implication from such powers.[393]

The cable companies and Baby Bells have used Dillon's Rule to attempt to block municipal telecommunications entry as exceeding local governmental authority. For example, in *Warner Cable Commc'ns, Inc. v. Schuylkill Haven*,[394] the court held that a borough should be enjoined from building and operating a cable television system, because in Pennsylvania, a Dillon's Rule state, the legislature had been silent on a borough's power to do so, except as to those systems operating by July 1979.[395] By contrast, the court in *Bellsouth Telecomms., Inc. v. City of Laurinburg*,[396] held that a city was authorized to make the Internet available over its fiber-optic network under a statute which allowed cities to provide "cable television services," defined to include any wire or cable system transmitting television or electronic signals.[397] The court found that Dillon's Rule, which mandates a strict construction of city powers, had been replaced in more recent cases by a "plain meaning" rule in determining whether "public enterprise" is "unauthorized" under state law.[398]

Other states have regulatory regimes intended to ban most broadband subsidies. Alabama, Florida, Iowa, South Carolina, Tennessee, Utah, and Wisconsin outlaw most broadband subsidies, and have adopted a number of provisions intended to increase the cost of city-supported telecommunications services.[399] For example,

393. *See* Byers v. Bd. of Supervisors of San Bernardino County, 68 Cal. Rptr. 549, 556 (Cal. Ct. App. 1968) (dismissing the county's attempt to classify television rebroadcasts as a public service implicit in several statutory provisions, and instead proclaiming such powers to be retained by the state until expressly granted to counties).

394. 784 F. Supp. 203, 211-12, 214-15 (E.D. Pa. 1992).

395. *Id.* For a decision by the Pennsylvania Supreme Court embracing Dillon's Rule, *see* Guthrie v. Borough of Wilkinsburg, 499 A.2d 570, 599-600 (Pa. 1985) ("A political subdivision has only those powers expressly given it by the legislature.").

396. 606 S.E.2d 721 (N.C. Ct. App. 2005).

397. *See id.* at 723-28 (interpreting state statutes broadly in order to grant cities any additional and supplementary powers reasonably necessary to carry the statutes into effect).

398. *See id.* at 724-26 (relying on recent North Carolina Supreme Court decisions that used the plain meaning rule without reference to Dillon's Rule).

399. *See* ALA. CODE § 11-50B-3 (LexisNexis 2005) (adopting regulations requiring public providers to allow nondiscriminatory access to any of its telecommunications equipment not needed for public purposes); FLA. STAT. ANN. § 350.81(2)(f) (West Supp. 2006) (banning cross-subsidization of telecommunications from utility or any other revenues); IOWA CODE ANN. § 388.10(1)(a)(1) (West Supp. 2005) (preventing use of general funds to support or subsidize telecommunications); S.C. CODE ANN.

Iowa law provides that municipalities may not spend any "general fund moneys for the ongoing support or subsidy of a telecommunications system,"[400] thereby prohibiting cities and counties from competing with private industry under most circumstances.[401] Cities in Iowa also may not direct revenue from municipal electric, gas, water, sewage, or garbage services for the "ongoing support" of a telecommunications system.[402] They are prohibited from offering telecommunications services for free as a public service, but must charge the full cost.[403]

Incumbent veto provisions are powerful mechanisms by which states may hinder municipalities from offering broadband or Wi-Fi Internet as a public service to their residents.[404] Congress and some states have considered or passed legislation requiring municipalities to grant a right of first refusal to incumbent broadband providers.[405] In arguably the most onerous such law, Pennsylvania mandates that municipalities outside of Philadelphia give incumbent providers two

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§ 58-9-2620 (Supp. 2005) (excluding public providers from receiving any financial benefit not afforded to nongovernment-owned telecommunications providers and from subsidizing services from any other source of revenue); TENN. CODE ANN. § 7-52-402 (2005) (barring subsidies for telecommunications equipment or services, but allowing the dedication of a reasonable portion of the electric plant to the provision of such services); UTAH CODE ANN. § 10-18-303(3)-(5) (2003) (prohibiting cross-subsidization through the use of tax, utility, below-market loan, or any other type of revenue, as well as any preferential or advantageous grant to itself or any other private provider of public telecommunications services); WIS. STAT. ANN. § 196.204(1)-(2) (West Supp. 2005) (limiting subsidization to retained earnings or revenues derived from the sale of directory advertising).

400. IOWA CODE ANN. § 388.10(1)(a)(1).

401. *See* IOWA CODE ANN. § 23A.2 (West Supp. 2005) (banning agencies and political subdivisions from private competitive markets unless authorized under state regulation or permitted by rule to promote services related to public education); Iowa Tel. Ass'n v. City of Hawarden, 589 N.W.2d 245, 252 (Iowa 1999) (holding that federal law "does not prevent the State of Iowa from prohibiting the offering of local [telecommunications] service by its political subdivisions"); Petitioner's Reply Brief at 13, *Nixon v. Missouri Municipal League*, 541 U.S. 125 (2004) (No. 02-1238), *available at* http://supreme.lp.findlaw.com/supreme_court/briefs/02-1238/02-1238.mer.pet.rep.pdf (arguing constitutionality of congressional action preempting restrictions on private enterprise ventures into areas of commercial service).

402. IOWA CODE ANN. § 388.10(1)(a)(4) (West Supp. 2005).

403. *See* IOWA CODE ANN. § 388.10(1)(a)(2) (West Supp. 2005) (requiring city to charge itself, at a reasonable rate, for facilities or equipment used to provide telecommunications services); IOWA CODE Ann. § 388.10(2)(b) (West Supp. 2005) (defining telecommunications services as any retail provision of telephone, Internet, or cable television services).

404. *See* Baller Herbst Law Group, *supra* note 380, at 2-3 (discussing legislative efforts to prevent municipalities from providing broadband services with greater data capacity than incumbent providers).

405. *See* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(f)(3) (2006); Shane Peterson, *Boiling Point*, GOV'T TECH., Nov. 4, 2005, *available at* http://www.govtech.net/magazine/story.php?id=97156 (criticizing Pennsylvania legislation granting right of first refusal to incumbent providers).

months to agree to establish, and over a year to actually establish, broadband service at the data speed requested by a municipality.[406] What gives this provision a potentially obstructionist character is that the price and quality of service may not be relevant to the right of first refusal, so that providers could block municipal action simply by offering high-cost broadband access such as a T-1 line.[407] Congress and the state of Florida have adopted a better approach, the former requiring that a private firm provide equivalent broadband service with the same coverage at equal or lower cost, and the latter providing that municipalities need only consider whether comparable broadband service will be generally available throughout the area.[408] This more flexible approach would expedite municipal broadband projects and create fewer opportunities for gamesmanship than the Pennsylvania law.[409]

Requirements that municipal broadband projects show a profit, or conduct expensive referenda that are ripe for abuse via corporate advertising,[410] will tend to make the United States lag even further

406. *See* Peterson, *supra* note 405 (explaining that prior to municipalities constructing their own networks, incumbent providers must first be given fourteen months to provide the updated services).

407. *See* Wilson, *supra* note 380, at 6-7 (quoting James Baller of The Baller-Herbst Group criticizing the measure for its lack of specificity regarding quality, and commenting that a "service provider could, cynically, claim its T-1 service meets the [new] data speed requirements").

408. Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(f)(3) (2006) ("The public provider may proceed with the project only if, during the 30-day period, no private sector entity submits a bid to provide equivalent advanced communications capability of the same scope for the same or lower cost to consumers, as determined by a neutral third party, and demonstrates the requisite technical and financial ability to provide that capability."); FLA. STAT. ANN. § 350.81(2)(b)(1)-(3) (West Supp. 2006) (municipality must consider whether private service of "same or a similar" character is "generally available throughout the community"). Florida law allows a municipality to operate telecommunications services only if they obtain and hold a certificate from the Florida Public Service Commission, which the Commission may grant or deny according to its determination of the public interest. *See* FLA. STAT. ANN. § 364.335(3) (West Supp. 2006).

409. *See generally* Wilson, *supra* note 380, at 6-7 (highlighting competitive differences between Florida and Pennsylvania telecommunication laws).

410. *See, e.g.*, LA. REV. STAT. ANN. § 45:844.50(A) (Supp. 2006) (requiring local authorities to obtain a majority vote by referendum prior to providing telecommunication services). The executive director of the Florida Municipal Electric Association has complained that incumbents are "consistently saying things that are untrue" and simply "making stuff up" to make municipal broadband look risky. Wilson, *supra* note 380, at 7. When supporters of municipal broadband for the Tri-Cities of St. Charles, Batavia and Geneva, Illinois lost a voter initiative to authorize funding, for example, Comcast and Southwestern Bell allegedly "bombarded the area with inaccurate information to persuade voters to reject a public fiber network." Baller & Lide, *supra* note 238, at 26 n.18. Likewise, providers of wireless networking technology that municipalities could use to deploy Wi-Fi have alleged that incumbent broadband and wireless corporations have engaged in an

behind nations that heavily subsidize broadband to make their workers and students more competitive.[411] A recently passed Florida law requires municipalities to hold referenda before financing such projects over periods in excess of fifteen years.[412] Similarly, Minnesota requires a super-majority vote before a municipality can offer broadband,[413] while Louisiana and Colorado require special elections to approve municipal broadband projects.[414]

C. Lifting All Legal Prohibitions on Municipal Broadband Will Accelerate the Advent of Universal Broadband Access

There are three principal reasons why all municipal broadband restrictions should be eliminated, preferably through federal legislation such as the CBA. First, municipal broadband is closing the digital divide along racial, economic, educational, and geographic lines.[415] Second, government subsidies in general and municipal broadband in particular have proven to be effective tools for promoting universal broadband access in other nations.[416] Third, broadband and Wi-Fi networks operated by cities and counties can be financially viable and are likely to encourage greater private broadband investment.[417]

"'organized campaign of disinformation'" against municipal Wi-Fi. Mike Angell, *Cities Face Backlash as They Plan Municipal Wireless Services*, INVESTOR'S BUS. DAILY, May 3, 2005, at A05 (quoting Ron Sege, chief executive of wireless gear firm Tropos Networks).

411. *See* Peirce, *supra* note 380 (citing a survey by the Organization for Economic Cooperation and Development ranking United States twelfth globally in broadband expenditures per capita).

412. *See* FLA. STAT. ANN. § 350.81(2)(f) (West Supp. 2006) (creating the necessity for public referendum before issuing bonds intended to finance communications projects if those bonds mature after more than fifteen years).

413. *See* MINN. STAT. ANN. § 237.19 (West 2003) (prohibiting municipal ownership of telephone exchanges without the approval of a majority of electors, and mandating municipal construction of telephone exchanges only upon successful referendum garnering sixty-five percent of the votes cast).

414. *See* COLO. REV. STAT. §§ 29-27-201(1)-202 (2005) (exempting projects from election requirement when no private broadband providers will offer service in the area to be covered); LA. REV. STAT. ANN. § 45:844.50(A) (Supp. 2006) (requiring local authorities to obtain a majority vote by referendum prior to providing telecommunication services).

415. *See* 151 CONG. REC. S7298 (daily ed. June 23, 2005) (statement of Sen. Lautenberg) (contending that the digital divide can be overcome by creating greater access to Internet services and allowing municipals to lower prices in underserved urban areas).

416. *See* 151 CONG. REC. S7299 (statement of Sen. McCain) (arguing that countries such as Canada, Japan, and Korea are outpacing the United States in high-speed Internet penetration due to cooperative systems that combine municipal and private networks).

417. *See id.* (maintaining that CBA would not limit competition, but prevent regulatory or competitive discrimination and encourage cooperation among providers).

1. Barriers to universal broadband access: The digital divide along racial, economic, educational, and geographic lines

Assuming that equitable access to Internet technology across racial and socioeconomic lines is a valued outcome, trusting the private market to roll out access on its own timetable is unlikely to achieve it. Racially discriminatory access to property and positions of value has persisted for decades in diverse sectors of the American economy.[418] African-Americans and Latino/Latinas are much less likely to accumulate wealth,[419] own a home[420] or business,[421] or receive needed medical care as non-Hispanic whites.[422] These racial disparities in ownership of, and access to, valuable property and services, inevitably carry over into access to information and telecommunications.[423]

For nearly a century, the information media and telecommunications industries in the United States remained

418. *See, e.g.*, University of Southern California ("USC"), Lusk Center for Real Estate, *USC Lusk Center for Real Estate Study Shows Sizeable and Persistent Racial Homeownership Gaps* (Mar. 21, 2005), http://www.usc.edu/schools/sppd/lusk/press/item.php?id=546 (uncovering persistent racial disparity in homeownership rates between non-Hispanic whites and minorities).

419. *See* RAKESH KOCHHAR, THE WEALTH OF HISPANIC HOUSEHOLDS: 1996 TO 2002 2 (Pew Research Center 2004), http://pewhispanic.org/files/reports/34.pdf (showing African-American and Hispanic families have a net financial worth equal to approximately one-tenth of non-Hispanic white families).

420. *See id.* (asserting that minorities face greater barriers to homeownership and have limited access to financial markets); USC, *supra* note 418 (revealing that non-Hispanic whites are currently nearly fifty percent more likely to own their own homes than minorities).

421. *See* Leonard M. Baynes & C. Anthony Bush, *The Other Digital Divide: Disparity in the Auction of Wireless Telecommunications*, 52 CATH. U. L. REV. 351, 372-73 (2003) (asserting that business ownership among minorities may largely be the product of disparate treatment by lending institutions and inadequate access to investors); KOCHHAR, *supra* note 419, at 15 (declaring business ownership rates among Latinos are slightly more than half that of non-Hispanic whites, with the rate of non-Hispanic blacks around one third that of non-Hispanic whites).

422. *See* COMMISSION ON UNDERSTANDING AND ELIMINATING RACIAL AND ETHNIC DISPARITIES IN HEALTH CARE, INST. OF MED. OF THE NAT'L ACADS., UNEQUAL TREATMENT: CONFRONTING RACIAL AND ETHNIC DISPARITIES IN HEALTH CARE 5, 426-40 (The National Academies Press 2003), http://darwin.nap.edu/books/030908265X/html/R1.html (finding minorities dying at higher rates, as they are less likely to receive proper health care for illnesses such as cancer, HIV, heart disease, and stroke); Rose Cuison Villazor, *Community Lawyering: An Approach to Addressing Inequalities in Access to Health Care for Poor, of Color and Immigrant Communities*, 8 N.Y.U. J. LEGIS. & PUB. POL'Y 35, 40-41 (2004-2005) (claiming subtle forms of discrimination have persisted in the U.S. healthcare system, and that such discrimination causes minorities to receive inferior care).

423. *See* ROBERT W. FAIRLIE, IS THERE A DIGITAL DIVIDE? ETHNIC AND RACIAL DIFFERENCES IN ACCESS TO TECHNOLOGY AND POSSIBLE EXPLANATIONS, 23 (Univ. of California, Latino Policy Institute and California Policy Research Center 2003), http://cjtc.ucsc.edu/docs/r_techreport5.pdf (proposing income as one of the two main causes of disparities in access to technology for minority groups).

profoundly oligopolistic in their structure,[424] and almost entirely excluded women and members of minority ethnic groups.[425] For decades, policies and practices of the U.S. government and the American film and broadcast industries contributed to denying African Americans, Native Americans, Latinos/Latinas, and Asian Americans effective access to telecommunications media.[426] History has shown that the federal government has repeatedly given away radio and TV licenses to too few people, almost all of whom are non-Hispanic whites.[427] Until the late 1940s, the federal government denied people of color licenses to operate radio stations, and until the late 1960s, few members of minority ethnic or racial groups were hired to work as journalists in radio or television.[428] There were no

424. As of July 2001, 98.5% of American cities were reported to have only one local newspaper to read. Media Ownership: Hearings Before the Commerce Comm. of the U.S. Senate, 107th Cong. 4 (July 17, 2001) (testimony of Eli M. Noam, Professor of Finance and Economics, Columbia University, Director, Columbia Institute for Tele-Information), http://commerce.senate.gov/hearings/071701 Noam.pdf. Likewise, the percentage of U.S. newspapers that had a local competitor declined from over sixty percent in the nineteenth century to less than two percent by 1986, leaving only twenty-eight cities with two or more newspapers competing for the attention of the public. *See* C. Edwin Baker, *Advertising and a Democratic Press*, 140 U. PA. L. REV. 2097, 2115-16 (1992) (faulting increased reliance on advertising revenue for the decline of competitive dailies within the same city). Similarly, most of the American book publishing business is controlled by between five and twelve large companies, depending on the source, and six or seven major studios have claimed over eighty percent of the domestic box office intake in 2004. *See* C. Edwin Baker, *Media Concentration: Giving up on Democracy*, 54 U. FLA. L. REV. 839, 880 & n.193 (2002) (summarizing data regarding number of companies that dominate book publishing); Box Office Mojo, *Studio Market Share: 2004*, http://www.boxoffice mojo.com/studio (follow "2004" hyperlink) (last visited Jan. 17, 2005) (charting breakdown of market share and revenue among top twelve film distributors in 2004).

425. *See* Eric Boehlert, *The Forbidden Truth About Jayson Blair*, SALON, May 15, 2003, http://www.salon.com/news/feature/2003/05/15/nytimes (noting that the New York Times had not hired a black columnist prior to the early 1990s); New York Times Co., *New York Times Timeline 1851-1880* (2005), http://www.nytco.com/ company-timeline-1851.html (admitting to not hiring an African-American reporter until 1945, and not hiring a female reporter, except to cover First Ladies, until 1961); Press Release, The Reporters Committee for Freedom of the Press, Pioneering New York Times Journalist Dies (Nov. 5, 2001), http://www.rcfp.org/news/ 2001/1105shanah.html (commemorating Eileen Shanahan as the first woman journalist hired in 1961 by the New York Times for assignments other than covering First Ladies).

426. *See* Juan González & Joseph Torres, *How Long Must We Wait? The Fight for Racial and Ethnic Equality in the American News Media* 8 (2004), http://images. democracynow.org/howlong.pdf (blaming the FCC for not intervening in the face of blatant racist practices among broadcast companies).

427. *See* Baynes & Bush, *supra* note 421, at 378-79, 385 (arguing that when FCC grants spectrum licenses for wireless telephone and other telecommunications services, members of minority groups are much less likely to be awarded the most valuable ones).

428. *See* González & Torres, *supra* note 426, at 8 (summarizing broadcasting's long history of racial discrimination).

African-American owned radio stations until 1949, and no such television stations until 1969.[429]

With the benefit of federal licenses to operate without competition on their assigned frequencies, the owners of telecommunications firms have imposed an extraordinary degree of concentration on American media industries.[430] Through the early 1980s, there were only three major television companies (NBC, ABC, CBS).[431] In 2004, the four largest television stations claimed seventy-three percent of the average local market.[432] Despite many more channels, the ownership of major media outlets may be more concentrated than at any time since the early 1960s.[433]

Even after ownership of media outlets was opened up to minorities on a wider scale, the radio, television, and motion picture industries continued to exhibit minimal representation of racial or ethnic minorities in positions of ownership or control.[434] Minority ownership of commercial radio and television stations remains minimal.[435] For many years, very few minorities held executive positions in film studios and television networks.[436]

Tracking inequalities in access to broadcast technologies, huge gaps in access to computers and the Internet sprang up in the 1990s, as non-Hispanic white, high-income, and well-educated Americans

429. *Id.* at 10. The first radio station owned by a Hispanic debuted in 1945, and the first Native American-owned radio station was licensed in 1970. *Id.* at 8-10.

430. *See* Eric Boehlert, *Pay for Play*, SALON, Mar. 14, 2001, http://dir.salon.com/ent/feature/2001/03/14/payola/index.html (observing that in recent years, three companies have controlled sixty percent of the radio stations in the top 100 U.S. markets); Alexandra Marks, *Media Future: Risk of Monopoly*, CHRISTIAN SCI. MONITOR, Sept. 19, 2002, at 3 (declaring that four companies have determined what two-thirds of listeners to radio news get to hear).

431. Noam, *supra* note 424, at 2-3.

432. Media Ownership: Hearings Before the S. Comm. on Commerce, Science, and Transportation, 108th Cong. (Oct. 2, 2003) (testimony of Eli M. Noam, Director and Professor of Finance and Economics, Columbia Institute for Tele-Information), http://commerce.senate.gov/hearings/testimony.cfm?id=950&wit_id=2681.

433. *See* Ted Turner, *My Beef with Big Media*, WASH. MONTHLY, July-Aug. 2004, http://www.washingtonmonthly.com/features/2004/0407.turner.html (attributing the concentration of media ownership to the loosening of ownership regulations by federal legislators and the pro-consolidation regulations put forth by the FCC).

434. *See* González & Torres, *supra* note 426, at 10-11 (chronicling the continued racism underlying FCC regulations that stymied minority representation in broadcast media prior to the civil rights movement).

435. *See id.* at 14 (proclaiming that by 2000, racial and ethnic minorities still owned only three percent of commercial television stations, three percent of commercial FM radio stations, and about five percent of commercial AM stations).

436. *See* Edward Guthmann, *Jackson Aims at Wrong Target; Black Showing Not Oscar's Fault*, S.F. CHRON., Mar. 27, 1996, at E3 (detailing allegations of racial under representation and "cultural lockout" in Hollywood); *Report Says Blacks Are Underhired in Hollywood*, N.Y. TIMES, Sept. 24, 1991, at C13 (reporting that "only a handful of blacks hold executive positions with film studios and television networks").

went online at rates far surpassing those at which African-American or Hispanic, low-income, or less-educated Americans did.[437] Starting about 1995, concerns began to mount that unequal access across neighborhoods to advanced telecommunications services in general, and high-speed Internet access in particular, revealed racial discrimination in the form of "electronic redlining."[438] Despite grassroots campaigns to outlaw electronic redlining in the Telecommunications Act of 1996, the final legislation did not include such a prohibition.[439] The 1996 Act included an aspiration to universal service without discrimination on account of race or other factors, but did not require equitable deployment on a statistical basis, or forbid electronic redlining.[440]

The Clinton administration believed in ensuring widespread and inexpensive access to computer-based information by all U.S. citizens, arguing that as a "matter of fundamental fairness, this nation cannot accept a division of our people among . . . information 'haves' and 'have-nots.'"[441] Accordingly, it carefully tracked the digital divide in a series of groundbreaking studies. In the first such report, released in 1995, the Administration discovered that a principal digital divide was based on race and national origin: non-Hispanic white Americans had computers at double to quadruple the rates of Hispanics and African-Americans.[442] Native Americans fared little better than

437. *See* Suneel Ratan, *A New Divide Between Haves and Have-Nots?*, TIME, Spring 1995, at 25, 26 (raising concerns over the digital divide, and the enormity of the possible impact to minority employment and education); *see also* Howard Bryant, *Will There Be Redlining in Cyberspace?*, BLACK ENTERPRISE, July, 1995, at 47 (contending that major carriers are selecting the most affluent areas for new telecommunications services, which in turn disadvantages minorities); Reginald Stuart, *High-Tech Redlining: Are African-Americans Being Frozen Out of the New Communications Network?*, UTNE READER, Mar. 1995, at 72-73 (citing U.S. Census Bureau study finding nearly thirty million whites and only one and one-half million blacks used computers at home in 1989); Robert Wright, *Low Fiber*, NEW REPUBLIC, June 27, 1994, at 4 (evaluating the intentionality of "redlining" and its impact on poor neighborhoods).

438. *See* Allen S. Hammond, IV, *Universal Service in the Digital Age: The Telecommunications Act of 1996: Codifying the Digital Divide*, 50 FED. COMM. L.J. 179, 206 (1997) (illuminating Congress's failure to include express language forbidding redlining of poor and minority communities in the 1996 Act, but instead incorporating analogous language into an amendment to the Communications Act of 1934).

439. *See id.* at 206-08 (arguing that so long as the guidelines allow providers to develop areas based on wealth, underprivileged communities will receive little more than basic services).

440. *Id.* at 202, 206.

441. DEPARTMENT OF COMMERCE NATIONAL INFORMATION INFRASTRUCTURE TASK FORCE, THE NII: AGENDA FOR ACTION (1993), http://www.ibiblio.org/nii/NII-Agenda-for-Action.html.

442. *See* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET: A SURVEY OF THE "HAVE NOTS" IN RURAL AND URBAN AMERICA tbl.5 (1995), http://www.ntia.doc.gov/ntiahome/tables.htm [hereinafter

Hispanics, while non-Hispanic minorities (other than Asian-Americans and Pacific Islanders) fared worse.[443] Other divides, the report found, were based on income and education: Americans with household incomes over $50,000 had computers at up to twenty times the rate of those with incomes of less than $25,000, while college graduates had computers at up to fifty times the rate of those with high school educations or less.[444]

The Commerce Department released its first report on racial and other disparities in Internet access in 1997.[445] The report showed that three times as many non-Hispanic whites as African-Americans or Hispanics had Internet access.[446] Income and education gaps also remained stark.[447] Generally poor infrastructure in rural or central city areas where more minority, poor, and less educated people often live could not explain these gaps, because they persisted among racial, income, and educational groups residing in areas of similar density.[448] Thus, the geographic digital divide, while very real, seems more likely to be caused by poverty and demographics rather than the other way around.[449]

FALLING THROUGH THE NET I] (showing, for example, that almost one-third of urban and central city non-Hispanic whites had computers, compared to only about one-tenth of urban and central city African-Americans or Hispanics, while almost one-fourth of rural non-Hispanic whites had computers, compared to only one in sixteen rural African-Americans and one in eight rural Hispanics).

443. *See id.* (demonstrating that only about fifteen percent of non-Hispanic Native Americans had computers, compared to a third or more of Asian-Americans and Pacific Islanders, but less than twelve percent of other non-Hispanic minorities).

444. *Id.* at tbls.2 & 11.

445. *See* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET II: NEW DATA ON THE DIGITAL DIVIDE, Highlights (1998), http://www.ntia.doc.gov/ntiahome/net2/falling.html [hereinafter *FALLING THROUGH THE NET II*] (reporting on computer usage statistics along lines of geography, income, race, age, education and household type).

446. *Id.* chart 2, http://www.ntia.doc.gov/ntiahome/net2/charts.html.

447. *See id.* charts 11 & 17 (providing, for example, that 75.9% of households earning over $75,000 per year had computers, while only 23% of those earning between $20,000 and $24,999 per year had computers; and that while 25.7% of those who had a high school diploma had a computer, 63.2% of those with a college degree had a computer).

448. *See* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET I, *supra* note 442, tbls.2, 5 & 11 (indicating large variances between homes with computers according to income, race, and educational attainment, and smaller variances between rural, urban, and central city areas); NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, *FALLING THROUGH THE NET II*, *supra* note 445, tbls. 11 & 17 (updating the data for 1997 on households with computers according to income and education).

449. *See* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, *FALLING THROUGH THE NET I*, *supra* note 442, at tbls. 2, 5 & 11 (providing data showing race, income, and education correspond with larger divides than geographic comparisons).

The digital divide worsened during President Clinton's second term on a percentage basis, with the gap between access by African-Americans and non-Hispanic whites widening by roughly forty percent, from about 13.5 percentage points in 1997 to 18.6 points in 1998, and the gap between access by Hispanics and non-Hispanic whites widening by a comparable amount.[450] The gap in home Internet access between non-Hispanic white and African-American/Hispanic households widened from 1997 to 1998.[451] Only forty percent as many African-Americans or Hispanics as non-Hispanic whites had home Internet access in 1998.[452] The percentage gap in Internet access between non-Hispanic white and African-American or Hispanic households yawned even further between 1998 and 2000, reaching an eighteen-point divide.[453] Asian-American households also lagged slightly behind non-Hispanic white households in home Internet access by the late 1990s.[454]

The digital divide continued to grow under the Bush administration, as the racial gap in online access by African-American and non-Hispanic white households hit twenty points in 2001 and 2003, and twenty-eight points between Hispanic and non-Hispanic

450. NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET: DEFINING THE DIGITAL DIVIDE (1999), chart I-23, http://www.ntia.doc.gov/ntiahome/fttn99/FTTN_I/Chart-I-23.html; *see also* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: HISPANICS FALLING BACK IN INFORMATION AGE (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/hispanics.htm (providing statistics showing that while Hispanics' access to computers and the Internet is increasing, the gap between Hispanics and non-Hispanic whites continued to grow between 1997 and 1998); NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: IN INFORMATION EXPANSION, BLACKS LAG BEHIND (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/african-americans.htm (showing that while the telephone gap is narrowing, and the overall number of African-Americans with computers is increasing, the computer and Internet usage gap between African-Americans and non-Hispanic whites is increasing).

451. NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: IN INFORMATION EXPANSION, BLACKS LAG BEHIND (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/african-americans.htm; NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: HISPANICS FALLING BACK IN INFORMATION AGE (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/ hispanics.htm (citing the fact that the computer ownership gap between Hispanics and non-Hispanic whites also widened by about forty percent from 1994 to 1998).

452. NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: RACIAL DIVIDE CONTINUES TO GROW (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/racial-divide.htm.

453. NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET: TOWARD DIGITAL INCLUSION, Executive Summary (2000), http://www. ntia.doc.gov/ntiahome/digitaldivide/execsumfttn00.htm.

454. *See* CISCO SYSTEMS INC., THE ETHNIC DIVIDE (2005), http://www.cisco.com/web/learning/netacad/digital_divide/issues/DigitalEthnic.html (reporting that Asian-American households had a 1.8% gap in home Internet use compared to non-Hispanic white households).

white households in those years.[455] Measured by adult home Internet users, a third fewer African-Americans had broadband access as non-Hispanic whites, as well as twenty percent fewer Hispanics as non-Hispanic whites.[456] By 2001, Asian-Americans appeared to have surpassed non-Hispanic white Americans in both Internet access generally speaking, and subscriptions to broadband in particular.[457] Asian-Americans of Middle Eastern descent, however, may continue to be less wired than the general population.[458]

In recent years, income, educational attainment, and geography have continued to be strongly associated with the percentage of households enjoying Internet access. In 2003, Americans with a high school education or less were one-half to one-seventh as likely to have Internet access as those with a bachelor's degree or more.[459] The income gap was just as wide, for Americans with incomes of $25,000 or less were almost one-half as likely to have Internet access as those with incomes of $75,000 or more.[460] This income divide continued to develop until in 2005, fifty percent of households earning less than $30,000 per year had no Internet access at all, while fifty percent of households earning more than $75,000 had high-speed broadband access.[461] According to a 2005 study, the majority of Americans with broadband "are affluent and well-educated," in that two-thirds of

455. A NATION ONLINE, *supra* note 18, at app. tbl. 1.

456. *See* FCC AVAILABILITY REPORT, *supra* note 81, at 36-37 (finding thirty percent of non-Hispanic white home Internet users had broadband in 2004 versus twenty percent of African-American users and twenty-four percent of Hispanic users). The percentage figure for African-American home adult Internet users with broadband grew more quickly from 2001-2003, more than doubling from nine percent to twenty percent, but a greater percentage of non-Hispanic white adult home Internet users without broadband in 2001 had acquired it by 2003, with an additional fifteen percent of the total population of non-Hispanic white Internet users acquiring broadband between 2001 and 2003, versus another eleven percent for African-Americans and only another four percent for Hispanics. *Id.* Thus, while "[t]here has been considerable growth in advanced [broadband] services usage by minority populations," it is not clear that racial and ethnic disparities in broadband access have declined. *Id.* at 36.

457. *See* CISCO SYSTEMS INC., *supra* note 454 (stating that the Asian-American Internet usage rate was at 60.4% compared with 59.9% for non-Hispanic whites).

458. *See, e.g.*, WAYNE BAKER ET AL., PRELIMINARY FINDINGS FROM THE DETROIT ARAB AMERICAN STUDY (2004), http://www.isr.umich.edu/news/arab-amer/final-report.pdf ("The digital divide is wider among Arabs and Chaldeans [living in the Detroit area] than in the general population . . . . [S]eventy-five percent of the general population uses a computer, compared to 55 percent of Arabs and Chaldeans.").

459. A NATION ONLINE, *supra* note 18, at app. tbl.1.

460. *Id.*

461. *See* Bill Newton, *Bring Internet Law Up to Speed*, SOUTH FLA. SUN-SENTINEL, Dec. 20, 2004, at 25A, *available at* http://www.freepress.net/news/article.php?id=5942. (arguing that by adopting more competitive measures in its "overhaul" of the Telecom Act of 1996, Congress can make Internet access more affordable).

households earning at least $75,000 per year had broadband at home, compared to only one-fifth of those earning less than $30,000.[462]

Finally, people living in rural or central city areas are less likely to have broadband access than those living in suburban areas.[463] Less than ten percent of rural homes had broadband access by 2005.[464] Thirty percent of sparsely populated zip codes had not one broadband subscriber in the entire zip code as of 2004.[465] About forty percent of zip codes where the median income was $21,644 or less in 2003 had no broadband subscribers at all.[466] Many very low income zip codes are in major cities such as Chicago, Cleveland, Dallas, Los Angeles, Miami, New Orleans, and Philadelphia.[467]

While documenting the exclusion of millions of Americans from the opportunities made available by the Internet, the Bush administration has downplayed the importance of the digital divide as a concept. The Commerce Department stopped using the term entirely in its reports on Internet access rates,[468] and failed to update the Clinton administration's annual reports on the digital divide called "Falling Through the Net."[469] New FCC Chairman Michael Powell called the "digital divide" "a dangerous phrase" that could lead to "government entitlement programs that guaranteed poor

462. Keefe, *supra* note 21.

463. *See* A NATION ONLINE, *supra* note 18, at app. tbl.1 (displaying rates of Internet use at 54.1% for rural, 50.3% for central city, and 58.8% for "urban not central city" dwellers in 2003).

464. *See* Amit R. Paley, *Broadband Crawling Its Way to Exurbs: Communities Create Long-Sought Access*, WASH. POST, May 23, 2005, at B01 (citing the National Rural Telecommunications Cooperative regarding community initiatives to expand rural access to broadband technology).

465. *See* FCC AVAILABILITY REPORT, *supra* note 81, at 6 (noting progress from two years prior when sixty percent of rural zip codes did not have any broadband subscribers).

466. *See id.* at 35 (referring to a 2001 report also showing that ninety-six percent of zip codes earning above $53,494 had broadband subscribers).

467. *See* RHETT A. BUTLER, 100 LOWEST INCOME ZIP CODES IN THE UNITED STATES (2004), http://wealth.mongabay.com/tables/100_lowest_income-5000.html (listing the 100 poorest zip codes where more than 5,000 tax returns were filed, which range from an average of $10,471 to $17,500 per return).

468. *Compare, e.g.*, A NATION ONLINE, *supra* note 18 (continuing to show racial divide in its data, but neglecting to mention the divide in its analysis), *with* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FACT SHEET: RACIAL DIVIDE CONTINUES TO GROW (1999), http://www.ntia.doc.gov/ntiahome/digitaldivide/factsheets/racial-divide.htm (addressing explicitly the problem of racial divide in computer and Internet access).

469. *See* NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, FALLING THROUGH THE NET: TOWARD DIGITAL INCLUSION (2000), http://search.ntia.doc.gov/pdf/fttn00.pdf (providing the last of the "Falling Through the Net" series on the NTIA's website).

people cheaper access to new technology, like . . . computers."[470] He dismissively equated the divide in access to the Internet with the gap in ownership of Mercedes-Benz luxury cars.[471]

2. Citywide Wi-Fi bridges the digital divide and benefits consumers

Municipalities and public utilities are well-equipped to be the "default provider[s] of critical services for the public good and fill the gap when the private sector fails."[472] By 2000, a "large percentage of municipal utilities" were studying ways to offer telecommunications services in conjunction with private firms.[473] In areas where strong telecommunications monopolies and duopolies "may continue to dominate in the short term, public enterprise solutions may be a necessary alternative."[474]

Municipal broadband has rescued many small communities from being relegated to the wrong side of the suburban-rural digital divide. Broadband Internet service was "frequently limited or lacking in rural areas" for years after its debut in urban areas.[475] For this reason, small cities and towns in more rural parts of America have taken the lead in providing fiber optic-based broadband to their residents. Starting in 1989, the public electric utility in Glasgow, Kentucky launched a cable arm that by the mid-1990s provided the local population with the first municipal broadband network in the United States, if not the world.[476] Cedar Falls, Iowa offered true broadband throughout the city, at ten Mbps, starting in 1997; eventually more than 5,500 Cedar Falls residents used the network.[477] In 2004, leaders of eighty

470. Stephen Labaton, *New FCC Chief Would Curb Agency Reach*, N.Y. TIMES, Feb. 7, 2001, at C1.

471. Christopher Stern, *New FCC Chairman Favors a Non-Activist Approach*, WASH. POST, Feb. 7, 2001, at E1.

472. Montgomery Van Wart, Dianne Rahm, & Scott Sanders, *Economic Development and Public Enterprise: The Case of Rural Iowa's Telecommunication Utilities*, 14 ECON. DEVEL. Q. 131, 142 (2000).

473. JOHN M. EGER & ARTHUR M. BECKER, AM. PUB. POWER ASS'N, TELECOMMUNICATIONS AND MUNICIPALITIES UTILITIES: COOPERATION AND COMPETITION IN THE NEW ECONOMY 37 (2000), http://www.smartcommunities.org/APPA_special_report.pdf.

474. Van Wart, Rahm, & Sanders, *supra* note 472, at 142.

475. *Id.*

476. *See Communications Act of 1994: Hearings on S.1822 Before the Comm. on Commerce, Sci., and Transp.*, 103d Cong. 351-53 (1994) (statement of William J. Ray on behalf of the APPA) (testifying that Glasgow "see[s] telecommunications services as just an extension of other utility services" such as electricity, water, and sewer).

477. *See* DORIS J. KELLEY, A STUDY OF THE ECONOMIC AND COMMUNITY BENEFITS OF CEDAR FALLS, IOWA'S MUNICIPAL TELECOMMUNICATIONS NETWORK 3, 5 (Oct. 2, 2003), http://www.opportunityiowa.org/_docs/Doris%20Kelley_White%20Paper.pdf (cataloguing the benefits of a municipality-sponsored fiber optic network in terms of job growth, education, and healthcare, by comparing data from Cedar Falls with a similar town with solely private telecommunications access).

municipalities in Iowa forged an alliance to demand local referenda to create public telecommunications utilities; they aimed to build local fiber-optic networks capable of offering broadband at speeds of up to 100 Mbps.[478]

The next major wave of municipal innovation involved Wi-Fi. Wi-Fi is an open standard for the wireless networking of personal computers at true broadband speeds of up to ten Mbps.[479] In 1999, the Institute of Electrical and Electronics Engineers ("IEEE") promulgated the Wi-Fi standard as IEEE standard 802.11.[480] Wi-Fi access points utilize unregulated spectrum to blanket areas of dozens to hundreds of feet in diameter with broadband (or dial-up) Internet signals.[481] When they are staggered throughout an area in Wi-Fi "'mesh' networks," these access points can operate at surprisingly low cost per user.[482] A Wi-Fi network requires only a computer with a Wi-Fi radio card and an access point to rebroadcast an Internet signal "over a free slice of the radio spectrum reserved for consumer use."[483] By 2004, a large American city could have dozens of Wi-Fi "hotspots," although with most providers charging high fees of up to $6 per hour, access remained prohibitively expensive for many persons and situations.[484] By the end of 2006, experts anticipated that 16.2 million American households would have home-based wireless routers or

478. *See* Catherine Yang & Ira Sager, *Hometown Broadband Heroes*, BUS. WEEK, Nov. 22, 2004, at 14, *available at* http://www.businessweek.com/magazine/content/04_47/c3909013_mz003.htm (stating that if the initiative is successful, "everyone—not just the top half—will get those byways"); Press Release, Opport*unity*Iowa (Nov. 11, 2004), http://www.opportunityiowa.org/_news/OI%20Press%20Release.pdf (announcing the initiative to place issue of establishing local telecommunications utility on local ballots).

479. *See* FERGUSON, *supra* note 5, at 49 (forecasting that WiFi networks with broadband speeds of 10 Mbps will be available in the majority of urban areas by the year 2010).

480. IEEE, *Wireless LAN Medium Access Control and Physical Layer Specifications* (1999), http://standards.ieee.org/getieee802/download/802.11-1999.pdf.

481. *See* Bauer, Kim, & Wildman, *supra* note 73, at 32 (comparing Wi-Fi service to other forms of broadband and highlighting its coverage of up to 300 feet).

482. David P. McClure, *The Myths of Municipal Wireless Networks*, *in* NMRC, *supra* note 28, at 1.

483. Rebecca Perry, *Wireless Fidelity*, TECH. REVIEW, Sept. 2003, at 81, *available at* http://www.technologyreview.com/read_article.aspx?id=13295&ch=infotech.

484. *See* FED. COMMC'NS COMM'N, HIGH SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF JUNE 30, 2005, at 5 tbl. 1 (Apr. 2006), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-264744A1.pdf (reporting that only about 2% of high-speed Internet connections in the United States. as of June 2005, or 970,133 out of 42,866,469, utilized wireless or satellite technology rather than DSL, cable, fiber, or power lines); Steven Titch, in NMRC, *supra* note 28, at 7 (noting that San Francisco had 396 hotspot locations, Atlanta 243, and Philadelphia 93); T-Mobile USA, Inc., *Services* (2006), http://hotspot.t-mobile.com/services_plans.htm (last visited May 20, 2006) (listing "$6.00 for the first 60 minutes" as "Pay As You Go" rate for Wi-Fi hotspot service).

other equipment to access the Internet wirelessly by plugging in to their wire-based Internet connection.[485]

"At current growth rates, many urban centers could have complete Wi-Fi coverage within a few years."[486] As President Bush acknowledged in an important policy speech, mid-sized cities such as Spokane, Washington have established "hot zones" that provide entire neighborhoods with wireless broadband.[487] For example, ten small and mid-sized cities in Florida offered Wi-Fi Internet access in designated areas by 2005.[488] A small city in Minnesota became "one of the first municipalities in the U.S. to install, own and operate its own broadband network" by building a Wi-Fi network after being underserved by the local cable and DSL providers.[489] A public utility in Owensboro, Kentucky has offered Wi-Fi at low rates since 2001.[490]

Wealthier suburbs and mid-sized cities where media and high-tech professionals congregate have also launched municipal Wi-Fi networks. On the west side of Los Angeles, the mixed-income community of Culver City has implemented Wi-Fi throughout several square miles.[491] The entertainment hub of Burbank, CA has launched one of the "first municipal broadband wireless hotspot[s]" in the L.A. area[492] as a free network covering a thirty-four-block area where up to 29,000 "entertainment-related employees" work.[493] Tempe, Arizona is on its way to becoming one of the first mid-sized cities to provide Wi-Fi broadband to its residents without distinction, all 150,000.[494]

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485. *See* Michel Marriott, *Hey Neighbor, Stop Piggybacking on My Wireless*, N.Y. TIMES, Mar. 5, 2006, at A-1, 22.

486. FERGUSON, *supra* note 5, at 50.

487. *See* President George W. Bush, *Remarks at the U.S. Department of Commerce, High Tech Improving Economy, Healthcare, Education (June 24, 2004*), http://www.whitehouse.gov/news/releases/2004/06/20040624-7.html (lauding Spokane's efforts to establish Wi-Fi hot zones as "a great opportunity" because it encourages citizen productivity).

488. *See* Opinion, *Give Cities Wi-fi Option*, PALM BEACH POST, Mar. 28, 2005, http://www.palmbeachpost.com/blogs/content/sharedblogs/palmbeach/editorial/entries/ 2005/03/ (arguing for municipalities' right to provide Wi-Fi access without interference from state governments' efforts to favor private providers).

489. Patricia Fusco, *Support Your Local Sheriff*, ISP PLANET, Dec. 6, 2001, http://isp-planet.com/fixed_wireless/business/2001/wisp_municipalities.html.

490. *See* Angell, *supra* note 410 (reporting that home broadband rates start at $25 per month and business rates at $50 per month).

491. Culver City, CA, *Modern Technology Brings Free Broadband Outdoors to Downtown Culver City* (Sept. 7, 2004), http://www.terabeam.com/news/pressreleases/pr-20040907_culver.php.

492. Burbank.com, *Burbank Hotspot: Free Internet Access* (May 2005), http://www.burbank.com/hotspot.shtml.

493. *Id.*

494. *See* Associated Press, *Company Hired to Build Tempe's Citywide Wifi Being Investigated*, KVOA TUSCON, May 26, 2005, http://kvoa.com/Global/story.asp?S=3395962&nav=J7NoaKaX (reporting that investigations into whether the company hired to provide the service was properly registered may cause delay in rollout).

It is in the largest cities, the last and in some ways the most difficult frontier of the municipal broadband revolution, that the potential of Wi-Fi to bridge racial and socioeconomic digital divides is making itself felt most strongly.[495] Most U.S. cities will either have Wi-Fi access or be in the process of rolling it out in about five years' time, according to California-based consulting firm MobileTrax.[496] Over 200 cities were planning or constructing municipal broadband networks as of early 2005,[497] and nearly 200 cities are currently deliberating about whether and how to implement citywide wireless broadband access.[498] Cities may spend up to $700 million through 2008 in setting up Wi-Fi and wire-based high-speed networks.[499]

City officials in Philadelphia have argued that only a public-private partnership will bring broadband Internet access to the city's poorest neighborhoods at prices of $20 per month or less.[500] Officials argue that without public participation, the goal of basic Web connectivity for all residents of Philadelphia will go unmet.[501] Citywide Wi-Fi will provide a much cheaper option for the city's poorer residents than the virtual duopoly of Comcast and Verizon, which charges residents $50 to $200 monthly.[502]

Other major cities, inspired by Philadelphia's example, have explored citywide Wi-Fi. Chicago tried in 2005 to "rush a plan through its city council" to authorize the building of a municipal Wi-Fi network, fearing preemptive action from the Illinois General

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495. *See infra* notes 496-526 and accompanying text.

496. *See Wi-Fi Goes to Town*, TECH. REV., July-Aug. 2004, at 23 (noting the trend in municipally-provided Wi-Fi services becoming an expected service).

497. David McClure, *The Myths of Municipal Wireless Networks*, *in* NMRC, *supra* note 28, at 1.

498. *See* Carmen Nobel, *Municipal Wi-Fi Catches On in U.S. Cities*, EWEEK, Feb. 1, 2006, http://www.eweek.com/article2/0,1895,1917896,00.asp (explaining that defensiveness of large Internet providers and state governments has only hastened cities' push for municipal Wi-Fi).

499. *See* Michael Grebb, *Cities Unleash Free Wi-Fi*, WIRED, Oct. 19, 2005, http://www.wired.com/news/technology/wireless_special/0,2914,68999,00.html (noting that San Francisco, Chicago, Denver, Miami Beach and Portland are all planning to create municipal Wi-Fi networks and the forecast for spending on municipal wireless networks for U.S. cities and counties is $700 million over the next three years).

500. Lee Gomes, *Despite Opposition, Might the Web Need a New Government Jolt*, WALL ST. J., Feb. 14, 2005, at B1.

501. *See id.* (arguing that the current private Internet providers will not serve poor communities with broadband access, or at least not at their target price of $20 per month); The Wireless Philadelphia Executive Committee, *supra* note 11, at 9, 38 (noting that privately operated Wi-Fi hotspots in Philadelphia, such as those of T-Mobile or various hotels, provide only "patchwork" coverage, and at the high cost of $10-15 per day).

502. *See* Andy Serwer, *Wi-Fi Mania: When Whole Cities Are Public Hot Spots*, FORTUNE, Oct. 31, 2005, at 53 (noting that where Verizon and Comcast had failed to deliver services, Philadelphia is stepping in to satisfy the market for affordable service).

Assembly.[503] Similarly, Cleveland's mayor consulted with Intel about building a "'wireless cloud' that eventually could hover over all of Northeast Ohio."[504] Boston and Minneapolis, among other cities, also debated citywide Wi-Fi in 2005.[505]

Over the summer of 2005, the Democratic candidate for the second highest public office in New York City campaigned vigorously for universal broadband Wi-Fi access, to bring the South Bronx's Internet access up to the level of South Korea's.[506] Estimates of the cost of this project ranged from $80 million, or $10 per New Yorker, to $1 billion, or $125 per New Yorker, the latter being the equivalent of only two to three months of broadband access at the prevailing rates of Time Warner Cable or Verizon.[507] By the fall of 2005, the Technology in Government Committee of the New York City Council

503. *See* O'Shea, *supra* note 13 (noting that the Illinois General Assembly was considering a bill similar to Pennsylvania's, prohibiting cities from building their own municipal networks).

504. Gomez, *supra* note 17.

505. *See* Robert Preer, *First to Go WiFi, and It Used to Be So Square*, BOSTON GLOBE, May 29, 2005, at 3-CI(City Weekly) (reporting that Boston has begun a "neighborhood WiFi Internet-access experiment"); Tom Scheck, *Minneapolis Considers Citywide WiFi Alternatives*, MINNESOTA PUBLIC RADIO, http://news.minnesota.publicradio.org/features/2005/12/08_scheckt_wifi/ (noting that the city is currently in the process of negotiating city-wide Wi-Fi with two private companies).

506. *See* Wayne Hanson, *Rasiej Plan Forwards Technology for New York City*, GOVERNMENT TECH., Aug. 18, 2005, http://www.govtech.net/magazine/channel_story. php/96307 (reporting on candidate Andrew Rasiej's proposal to create citywide WiFi service and to make subways cell-phone compatible); Tim McDevitt, *New York Gets Wired*, EPOCH TIMES, June 24, 2005, http://www.theepochtimes.com/news/5-6-24/29791.html (covering a speech by Andrew Rasiej, candidate for office of Public Advocate in New York City, in which he asserts that most public school students only have access to computers for one hour per week).

507. *See* Bruce Fein, Letter to the Editor, *High Cost of Wi-Fi*, N.Y. TIMES, Aug. 14, 2005, at 4-11 (estimating cost at about $1 billion); McDevitt, *supra* note 506 (providing a proponent's estimate of $80 million); *The Big Apple Goes Wireless*, *supra* note 12, at 50 (estimating the cost of "mesh" coverage for Manhattan at $500 million to $1 billion). These estimates are probably inflated by several times if not a factor of 100. *See* Ron Sege, President and CEO, Tropos Networks, *Summary of Statement Before the New York City Council, Committee on Technology in Government Oversight: Is Brooklyn Business Suffering from a Broadband Gap?* (Jan. 10, 2005), http://www.tropos.com/company/2005_01_10.html (summarizing the speech of the CEO of a company with substantial experience in building citywide Wi-Fi networks, estimating that the cost of a Wi-Fi network across New York City could be as little as $30,000 per square mile, for an installation cost of less than $10 million to cover the city's 320 square miles); *see also* NEW YORK CITY FIRE DEPARTMENT, *History of Fire Service* (2005), http://ci.nyc.ny.us/html/fdny/html/history/fire_service.shtml (stating that the area of New York City covers 320 square miles). Philadelphia has reported the cost of its wireless broadband network as $70,000 to $100,000 per square mile, which would make the cost of covering New York City's 320 square miles with wireless connectivity as little as $24 million. *See* Christopher T. Heun, *Government Bridging The Digital Divide*, INTERNET WEEK, Aug. 12, 2005, http://www.Internetweek com/168601371 (reporting cost estimate of Philadelphia's Wi-Fi network by its Chief Information Officer, though also including another estimate of $150,000 per square mile provided by a private research company).

was debating ways to increase broadband penetration in the city to over half of residents, with an ultimate goal of "affordable broadband Internet access to every city resident, business and non-profit organization."[508] Citywide universal broadband could improve the education of the city's children and facilitate emergency response and other city services, one councilmember argued.[509] In December 2005, the City Council authorized a commission to study city-funded broadband for three years, a disappointing do-nothing result.[510] Three-fifths of New Yorkers must carry on with no Internet or with slow dial-up, it seems.[511]

Most recently, San Francisco city officials have unveiled plans for a citywide Wi-Fi network that will permit "anyone with a Wi-Fi-enabled computer to go online whether at home, in a park or in a cafe."[512] San Francisco's Mayor, Gavin Newsom, has pledged that the Wi-Fi network "will help keep San Francisco a technology leader and help bridge the digital divide of Internet haves and have-nots."[513] Mayor Newsom argues that providing universal broadband guarantees the "fundamental right" of access to information.[514] Even more practically, the network would be a backup communications system in the event of a crippling natural disaster such as an earthquake.[515]

Additionally, a public-private partnership in Silicon Valley is planning the first major regional governmental-supported Wi-Fi

508. Marcus A. Banks, *Universal Internet Access—Not Just A Campaign Theme*, GOTHAM GAZETTE, Oct. 2005, http://www.gothamgazette.com/article/tech/20051019/19/1617.

509. *See id.* (arguing that the benefits outweigh privacy concerns created by privately provided municipal broadband supported by advertising).

510. *See New York City Establishes Broadband Advisory Committee*, GOVERNMENT TECH. (Dec. 22, 2005), http://www.govtech.net/magazine/channel_story.php/97698 (noting that the legislation requires the committee to meet in public hearings only two times in three years, and issue yearly reports to the Mayor and City Council). As a prominent technology Web site pointed out: "While cities like Philadelphia, New Orleans and San Francisco are moving full steam ahead on their projects, New York is still just trying to get a commission together to look at the issue." Marguerite Reardon, *Can Wi-Fi Make It in Manhattan?*, CNET NEWS.COM (Dec. 12, 2005), http://news.com.com/Can+Wi-Fi+make+it+in+Manhattan/2100-7351_3-5992316.html.

511. *See* Reardon, *supra* note 10 (noting that only forty percent of New Yorkers had broadband by December 2005).

512. Verne Kopytoff, *City Wi-Fi Chills Telecoms; Cheaper, Even Free, Online Access Would Hit SBC, Comcast*, S.F. CHRON., Oct. 5, 2005, at C1, *available at* http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/10/05/BUG3AF2GIU1.DT.

513. *Id.*

514. Eric Auchard, *S.F. Mayor Sees Wireless Service As Basic Right*, REUTERS, Oct. 3, 2005, *available at* http://www.commondreams.org/headlines05/1004-09.htm.

515. *Id.*

network, spanning four counties and thirty-six cities.[516] The Silicon Valley cities of Santa Clara and Cupertino already waft free Wi-Fi broadband across entire zip codes spanning key neighborhoods.[517] The regional Silicon Valley initiative intends to deploy a new wireless technology called WiMax, which promises to greatly enhance the speed, power, range, and usability of wireless broadband.[518] WiMax can provide wireless high-speed Internet access at speeds far exceeding those available over cable or DSL broadband connections.[519] "A single Wi-Max transmitter will send broadband Internet signals up to 30 miles and penetrate buildings . . . ."[520] For these reasons, experts anticipate that WiMax "will quickly dominate the fixed broadband wireless market."[521]

Even if municipal services fall short of assuring universal broadband access in their own right, municipal entry into the broadband industry promises to bridge the digital divide in American society by spurring the cable companies and Baby Bells to reduce the price, and improve the availability and quality, of the broadband service available in rural, inner-city, and minority-group communities.[522] Rather than "crowding out" private broadband providers, municipal broadband tends to increase the number of private broadband providers.[523] Municipal service provision tends to

516. *See* Ryan Kim, *Silicon Valley Wi-Fi network sought Wireless coverage from Daly City to Santa Cruz*, S.F. CHRON., Apr. 29, 2006 (relating that the plan will cover 2.4 million people).

517. *See* Nobel, *supra* note 498 (stating that the service is being provided for free from a small service provider called Metrofi).

518. *See* Ryan Kim, *supra* note 516 (reporting that the plan calls for low cost or free service at 256 Kbps with capability to expand to paid service at 1 Mbps); David Strom, *Finding New Connections When Wi-Fi Is Not Enough*, N.Y. TIMES, Jan. 25, 2006, at G5 (showing WiMax has a range of thirty miles and higher speeds than Wi-Fi); Titch, in NMRC, *supra* note 28, at 6-7 (noting that the average distance for WiMax would be three to five miles at 75 Mbps).

519. *See* Steve Rosenbush, *Why WiMax Could Hit the Hotspot*, BUS. WEEK, Oct. 5, 2005, *available at* http://www.businessweek.com/technology/content/oct2005/tc2005105_ 6161_tc024.htm (reporting that WiMax is twenty to thirty times faster than household broadband).

520. Tuerck, in NMRC, *supra* note 28, at 21; *see also* Charlie Lanter, *Houston Could Be First Wireless County in U.S.*, MACON (GEORGIA) TELEGRAPH, Nov. 20, 2003, http://web.archive.org/web/20050316175604/http://www.macon.com/mld/macon/2003/11/30/news/7378346.htm (reporting that WiMax service will soon be available in Houston for a cost of $15 to $30 per month).

521. Senza Fili Consulting, *WiMAX Will Dominate Fixed Broadband Wireless Market but Mobile Services Using the Technology Will Be Slower to Take Off* (Feb. 7, 2006), http://www.marketwire.com/mw/release_html_b1?release_id=108691.

522. *See infra* notes 523-526 and accompanying text.

523. *See* FMEA, *supra* note 3, at 4, 10 ("While critics charge that municipalities 'crowd out' private investment, the reality in Florida shows that where municipalities invest in broadband, there are more private providers of broadband services . . . . A recent analysis by Applied Economic Studies, Inc., shows that . . . where municipalities have invested in broadband infrastructure, local telecommunications

"significantly" improve the quality and reduce the price of the services available in a locality.[524] In telecommunications, price wars with municipal providers can drive down subscriber rates by twenty-two percent, the FCC has found.[525] As the pioneer of airline deregulation has pointed out, competition between public and private service providers "'is highly conducive to improved [industry] performance.'"[526]

3. Subsidies promote universal broadband access in Canada, Europe and Asia

City-supported broadband and Wi-Fi projects may also help the United States catch up to its trading partners and commercial rivals in achieving universal broadband access.[527] Many nations with higher broadband penetration rates than the United States, including Canada, Japan, and South Korea, "have used municipal systems and governmentally-provided infrastructure as important components of their broadband strategy."[528]

Relative to other nations' broadband networks, broadband in the U.S. resembles less an information superhighway than a "bumpy, two-lane country road."[529] The federal government "has failed to create a modern, competitive, open architecture local broadband industry" as "broadband services are [held] hostage to the self-interest and

competition is more robust and vibrant," and that "municipal construction of communications networks expands the number of private firms serving the same market by more than 60%.").

524. Reiter, *supra* note 127, at 298.

525. *See id.* (noting also that even "serious consideration" of introducing municipal service tends to drive down private service rates).

526. Harvey L. Reiter & Stephen P. Chinn, *Municipal Entry into Telecommunications and Cable Services: Benefits and Barriers*, 44 MUN. LAW. 14, 15-16 n.37 (2003) (quoting 2 KAHN, *supra* note 111, at 104).

527. *See* FMEA, *supra* note 3, at 9-10 (arguing that privately owned telecommunications companies are obligated to maximize shareholder profits and therefore "lack the motivation to deploy broadband with the breadth and speed that the public interest requires," whereas local governments instead owe a duty to maximize economic development and therefore may better promote the public interest in achieving modern broadband technologies); Harold Feld et al., *Connecting the Public: The Truth About Municipal Broadband*, at 11 (Apr. 2005), http://www.mediaaccess.org/MunicipalBroadband_WhitePaper.pdf (concluding that as public sector players enter the market, competition and the number of broadband consumers will increase).

528. FMEA, *supra* note 3, at 9.

529. Forsberg, *supra* note 20 (quoting TechNet, a lobbying group that promotes the growth of technology, as it compares U.S. broadband development to that of other countries). Technet's membership includes Intel, Microsoft, Verisign, NASDAQ, Amazon.com, Apple Computer, and J.P. Morgan. Technet, *Who We Are* (2004), http://www.technet.org/who2/memberListName.

inefficiency of powerful incumbent firms."[530] Antitrust enforcers and broadband regulators in the United States, including the Department of Justice and FCC, have allowed broadband competition to atrophy.[531] This lack of competition suppresses broadband penetration, as a study of thirteen European nations concluded that broadband penetration is closely correlated with the competitiveness of local broadband markets.[532]

By comparison, Canada ranks in the top five nations in the world in broadband connectivity, although European nations are giving it a run for its money.[533] Canada has "successfully combined municipal systems with privately deployed networks" to wire its vast expanses with broadband connectivity.[534] For example, the Canadian cities of Calgary and Fredericton have blanketed portions of their downtown areas with free wireless broadband access, and other Canadian cities and provinces are expected to follow suit.[535] The Canadian Government, reportedly the first country in the world to connect all

530. *Broadband Policy and the Future of American Information Technology: Hearings Before the U.S. Senate Committee on Commerce, Science, & Transportation*, 108th Cong. (2004) (statement of Charles Ferguson, Senior Fellow, Economic Studies, The Brookings Institution), *available at* http://www.brookings.org/views/testimony/20040428.htm.

531. *See* Bleha, *supra* note 5, at 117 (stating that in 2003 the FCC ruled that telephone companies need not share ultra-high-speed fiber networks with competitors and access to telephone lines would be terminated in 2006 for firms wishing to compete in DSL markets, while the Bush administration failed to appeal a court ruling that telephone companies had no obligation to ensure competition in provision of DSL service over telephone lines).

532. *See* Richard Cadman & Chris Dineen, *Broadband and i2010: The Importance of Dynamic Competition to Market Growth* (Feb. 21, 2005), http://www.spcnetwork.co.uk/uploads/20050221_broadband_analysis.pdf (finding a forty percent correlation between the level of broadband take-up and competition between access modes in European countries and a seventy-two percent correlation between rate of change in levels of market concentration and rate of broadband take-up such that for every one percent decrease in market concentration there is a three percent increase in broadband take-up); *see also* Feld et al., *supra* note 527, at 11 (asserting that currently the broadband market remains an ILEC/cable duopoly but as competition increases, prices will decrease, quality of service will increase, and the market will experience an increase in broadband consumers).

533. *See* Michael Geist, *Canadian Copyright Bill: A Missed Opportunity for Education*, OTTAWA CITIZEN (CANADA), June 29, 2005, at F1 (noting that Canada spent billions constructing world-class Internet infrastructure spanning the entire country).

534. Robert MacMillan, *Congress Tunes in to WiFi*, WASHINGTONPOST.COM, June 27, 2005, http://www.washingtonpost.com/wp-dyn/content/article/2005/06/27/AR2005062700482.html (quoting Senator John McCain).

535. *See* Michael Geist, *Let Towns, Cities Provide Cheap, Everywhere Broadband*, TORONTO STAR, Feb. 28, 2005, at D2 (stating that municipally-supported broadband may be the only realistic means of bringing connectivity to smaller Canadian cities to bridge the digital divide between urban and rural communities, where in 2003 eighty-six percent of Canadians had access to broadband services but only twenty-eight percent of Canadian communities had access).

of its classrooms to the Internet,[536] is committed to "providing high-capacity Internet access to all Canadian communities."[537] It is spending $155 million to bring subsidized satellite broadband to over fifty-two remote communities, many of whose residents are members of Aboriginal communities.[538]

Northern European nations, such as Sweden, have led the world in access to the Internet, broadband, and wireless telephony.[539] Under the rubric of a European broadband policy, which aims for "an information society for all," Swedish statistics on computer ownership, Internet access, and broadband penetration as a percentage of inhabitants or households compare favorably to those for the United States or Canada.[540] Approximately seventy-four percent of Swedes had Internet access in 2005, compared to sixty-nine percent of Americans.[541] In terms of broadband penetration rates, Sweden also led the United States by 2003, with over thirty percent of households with broadband.[542]

536. Geist, *Canadian Copyright Bill*, *supra* note 533, at F1.

537. Government of Canada, *Lucienne Robillard Announces $35 Million to Bring Broadband to Aboriginal Communities* (May 20, 2004), http://www.ic.gc.ca/cmb/elcomeic.nsf/icPages/Menu-e (follow "Media Room" hyperlink; then follow "News Releases" hyperlink; then follow "Archives" hyperlink; follow "May 20, 2004" hyperlink).

538. *See id.* (adding that forty-one of the fifty-two communities in British Columbia, Manitoba, Ontario and Quebec are Aboriginal communities, all of which were selected based on financial capability, demonstrated community support and readiness to deploy and use satellite capacity).

539. *See Global Broadband Subscribers to Near 440m by 2010—Report*, TOTAL TELECOM, Aug. 10, 2005 ("In terms of geographical regions, Japan, South Korea, Sweden and Finland will have the highest rates of broadband penetration at over 30%."); Economist Intelligence Unit, *The 2005 E-Readiness Rankings* (Apr. 30, 2005), http://www.ebusinessforum.com/index.asp?layout=rich_story&doc_id=6427 (reporting that the Nordic nations of Denmark, Sweden, Finland, and Norway "remain best in class in key areas of connectivity, such as mobile penetration and Internet use"); European Commission, *European Electronic Communications Regulation and Markets 2005 (11th Report)*, COM (2006) 68 final, at 6 (Feb. 2, 2006), *available at* http://europa.eu.int/information_society/policy/ecomm/doc/implementation_enforcement/annualreports/11threport/com_2006_68_en.pdf (demonstrating that broadband penetration is substantially higher in the Netherlands, Denmark, Finland, Sweden and Belgium than in the United States or Japan); *Research and Markets: How Did France Go from Internet Laggard to Broadband Leader?*, BUS. WIRE, June 27, 2005, http://www.findarticles.com/p/articles/mi_m0EIN/is_2005_June_27/ai_n14698127 ("[C]ountries such as the Netherlands, Belgium, Denmark, Switzerland and Sweden all recorded broadband penetration rates equal or higher than the US at the end of 2004.").

540. *See* Helena Lindskog & Magnus Johansson, *Broadband—A Municipal Information Platform: Swedish Experience*, 31 INT'L J. OF TECH. MGMT. 47, 47 (2005).

541. *See* European Travel Commission, *New Media Review* (Aug. 25, 2005), http://www.etcnewmedia.com/review/default.asp?SectionID=10 (ranking Sweden as having the third highest level of Internet usage compared to the United States, which ranked sixth, also behind New Zealand, Iceland, Denmark and Hong Kong).

542. *See Broadband Subscribers and Penetration Rate in Various Countries, 2003*, EUR. TELECOM, Mar. 1, 2004, at 1.

Although Sweden and other northern European nations have deregulated their telephone networks and broken up their state-owned information monopolies, they have clung to a universal service model for ensuring broadband Internet access for all citizens.[543] Sweden has successfully deployed municipal broadband networks to bridge the digital divide between adequately served wealthier urban areas and underserved poorer rural areas.[544]

> In Sweden today, the national broadband policy is to a large extent being effected by municipalities building so called urban or municipal area networks ("stadsnät"). Apart from national subsidies for building the national optical fiber network trunk net . . . and enabling all 289 Swedish municipalities to connect to this national grid, there are also subsidies for municipalities building networks within the community . . . . For many Swedish municipalities the build-up of urban networks was initiated in the early 1990s, and today some 90% of Sweden's municipalities have some kind of urban network.[545]

As of 2005, about ninety percent of Swedish municipalities had deployed urban broadband networks, while thirty percent of municipalities with over 200 inhabitants had "area networks."[546]

Likewise, East Asian countries have propelled themselves to the forefront of the broadband race by using massive subsidies to universalize access.[547] The high levels of East Asian broadband connectivity may give Asian industries a decisive advantage in fields ranging from telemedicine to distance education and Internet-based games.[548]

With a GDP per capita less than a third as much as the United States enjoys, South Korea has Internet connections over five times as fast as U.S. connections, over which consumers can watch television of excellent quality.[549] The South Korean government seized on

543. *See* Lindskog & Johansson, *supra* note 540.
544. *See id.*
545. *Id.*
546. *Id.*
547. *See* Dan Mitchell, *Broadband Beat Down*, N.Y. TIMES, June 25, 2005, at C5 (noting that Japan surpassed the U.S. in development and expansion of broadband by instituting an "industrial policy" providing incentives that resulted in a higher percentage of homes with broadband, as well as cheaper and faster connections).
548. *See id.* (stating that Japan, South Korea, and other Asian countries are "poised to leap ahead of the United States" in numerous areas while the U.S. economy is at risk of losing up to $1 trillion due to constraints on broadband deployment).
549. *See* Forsberg, *supra* note 20 (reporting that the United States ranks thirteenth in rollout of broadband where GDP per capita in 2004 was $40,000 and consumers experience broadband speeds up to four Mbps, whereas South Korea is the leader in rollout of broadband where GDP per capita in 2003 was $12,600 and consumers currently enjoy speeds up to 20 Mbps).

universal broadband access as a job-creating infrastructure project, and invested billions of dollars in subsidized computers for poorer citizens and subsidies for DSL and fiber-optic networks.[550] The South Korean government spent $9.2 billion on broadband infrastructure from 1999-2003, and planned to invest an additional $11 billion by 2005 in providing ninety percent of the nation's households with service at 20 Mbps.[551] Buoyed by this generous support, South Korean consumers pay about one-tenth as much for broadband as American consumers.[552] South Koreans obtain access at 10 Mbps for the same price U.S. consumers pay for 1.5 Mbps DSL or cable modem access.[553]

The Japanese also surpassed the United States by 2003 in broadband penetration as a percentage of households, with consumers in Japan paying much less for broadband at much higher speeds.[554] By the end of 2005, "'ultra-high-speed' broadband, which runs through fiber-optic cable," will be available throughout Japan,[555] with eight Mbps for as little as $10.[556] These fiber-optic broadband connections empower consumers to utilize video telephones,

550. *See id.* (after South Korea experienced a financial crisis in 1997-98, the government invested in the high-tech industry, creating jobs and a demand for modems, routers, servers, computers, resulting in the growth of a new infrastructure and ultimately a successful economy); Rob Frieden, *Best Practices in Broadband: Lessons from Canada, Japan, Korea and the United States* 14 (July 2004), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=567802 (follow Social Science Research Network "New York, USA" hyperlink to download document) (describing *Cyber Korea 21*, a government plan articulated in 1997 to provide every citizen with access to a personal computer as well as financial support for construction of broadband networks).

551. Irene K. Kunii & Moon Ihlwan, *Where Broadband is Really Booming*, BUS. WK., May 5, 2003, at 88.

552. *See* Mark Cooper, *Expanding the Digital Divide & Falling Behind on Broadband: Why a Telecommunications Policy of Neglect is Not Benign*, at 1 (2004), *available at* http://www.consumersunion.org/pub/ddnewbook.pdf (noting that in three years the price gap between what American consumers and South Korean consumers pay for broadband on a Mbps basis has doubled); Sherille Ismail & Irene Wu, *Broadband Internet Access in OECD Countries: A Comparative Analysis, Office of Strategic Planning and Policy Analysis and International Bureau*, at 6-7 & fig. 3 (2003), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-239660A2.pdf ("price per [M]bps can be very low" in Japan and South Korea, as low as $3.88 per Mbps, compared to $29.44 per Mbps charged by Comcast).

553. *FCC Availability Report*, *supra* note 81, at 5 (Commissioner Michael J. Copps, dissenting).

554. *See* McChesney & Podesta, *supra* note 306, at 14 (asserting that American residents and businesses currently pay "two to three times as much for slower and poorer quality service" as Japanese consumers); Mitchell, *supra* note 547 (describing Japanese broadband as half the price and sixteen times the speed of American broadband); *see also* Cooper, *Expanding the Digital* Divide, *supra* note 552, at 1 (stating that Americans pay ten to twenty times as much for broadband, on a Mbps basis, as consumers in Japan).

555. Bleha, *supra* note 5, at 115.

556. *FCC Availability Report*, *supra* note 81, at 5 (Commissioner Michael J. Copps, dissenting).

telecommuting, speedy movie downloads, digital high-definition television, and multiplayer online gaming.[557] Among other policy decisions promoting broadband competition, "the Japanese government . . . encouraged municipalities to build their own networks, especially in rural areas."[558] Additionally, Japan's antitrust regulators pried open the nation's telephone infrastructure to new ventures such as Yahoo! broadband, which rolled out much faster broadband as early as 2002.[559] The implementation of government subsidies, loan guarantees, and tax breaks also helped high-speed Internet access become much more affordable than in the United States.[560]

Perhaps the most surprising broadband success story in the world is mainland China. By 2006 or 2007, China may surpass the United States in the total number of broadband subscribers, despite average incomes less than a fifth as much per person.[561] In 2005, China had the most Internet users in the world for a single nation outside the United States, although as a percentage of its enormous population,

557. *See* Bleha, *supra* note 5, at 114 (noting that data could not be transmitted at ultra-high speeds through pre-existing Japanese phone lines).

558. McChesney & Podesta, *supra* note 306, at 15.

559. *See* Bleha, *supra* note 5, at 113 (explaining that after the Japanese government instituted one of the most competitive regimes in world, compelling telephone companies to grant competitors access to phone lines, Yahoo! broadband was created, which offered high-speed service five times faster than the typical U.S. broadband connection).

560. *See id.* at 114-15 (describing how incentives led to "rapid deployment of fiber networks" and competition which decreased price of high-speed Internet connections in Japan to as low as $22 a month); McChesney & Podesta, *supra* note 306, at 14 (arguing that broadband in the U.S. is the most expensive in the developed world such that sixty percent of U.S. households do not subscribe because of availability or expense, whereas most Japanese citizens can access broadband for just $22 a month).

561. *See* Peter Sayer, *China Could Overtake US in Broadband Access This Year*, INDUSTRY STANDARD, Apr. 4, 2005, http://www.thestandard.com/movabletype/datadigest archives/003211.php (noting that although the United States had 8.1 million more broadband subscribers than China at end of 2004, the growth rate in China during July-December 2004 was larger than in the United States); Marguerite Reardon, *China to Trump U.S. in Broadband Subscribers*, CNET NEWS.COM, May 4, 2005, http://news.com.com/China+to+trump+U.S.+in+broadband+subscribers/2100-1034_3-5695591.html (asserting that China will have fifty-seven million broadband subscribers and the United States will have fifty-four million by the end of 2007 according to market research firm iSuppli); Web Site Optimization, *January 2006 Internet Bandwidth Report: China Will Pass US in Broadband Lines by Late 2006*, Jan. 24, 2006, http://www.prleap.com/pr/24601 (arguing that although the United States currently has the highest number of broadband subscribers, China should overtake the United States by end of 2006 as its current yearly growth rate exceeds 90% compared to 29.08% in the United States). For average incomes, see CIA, *World Factbook: GDP Per Capita* (2004), http://www.cia.gov/ia/publications/factbook/rankorder/2004rank.html.

Chinese Internet access lagged behind most developed nations and even Brazil and Croatia.[562]

The Chinese government has implemented policies to bridge the staggering digital divide between the urban east and more rural west of China, where urban households own sixteen times as many personal computers and enjoy Internet access more than 140 times as often.[563] China's tenth "five-year plan" for economic development since the communist revolution planned "greater efforts to develop broadband information networks across the country,"[564] and set a target whereby twenty million of China Telecom's 100 million Internet users would have broadband access by 2005.[565] The government also broke up China Telecom into northern and southern divisions as a pro-competitive move.[566] Although it is difficult to estimate what might have happened absent the breakup, the less concentrated post-breakup market structure has contributed to rapid Chinese take-up of broadband, with subscribership doubling annually for both new companies.[567]

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562. *See* European Travel Commission, *supra* note 541 (stating that China had the second largest number of Internet users at the end of 2005 with 119.5 million, compared with 197.8 million users in the United States).

563. Jun Xia & Ting-jie Lu, *Universal Service Policy in China: Building Digital Bridge for Rural Community*, at 6 tbl.2 (Aug. 31, 2005), http://web.si.umich.edu/tprc/archive-search.cfm (search for papers from 2005 under "TPRC papers archive;" then follow PDF hyperlink for article).

564. *Chinese Pin High Hopes on Booming IT Industry*, CHINA DAILY, Mar. 13, 2001, http://www.china.org.cn/english/MATERIAL/9059.htm.

565. Telecommunications Industry Association, *Five-Year Plan Set for China's Three Large Operators*, PULSE ONLINE (May 2001), http://pulse.tiaonline.org/article.cfm?id=466. In what may be a related effort to fulfill goals articulated in China's tenth "five-year plan," the Ministry of Information Industry launched the Village Access Project in 2004 which divided the responsibility of providing improved telecommunications service to 40,000 rural villages among China Telecom and five other carriers, based on their share of local revenue. *See* Xia & Lu, *supra* note 563, at 9 (explaining that rural Chinese villages are underserved and the government took responsibility for improving rural communications rather than leaving it to market forces). Previously, China Telecom enjoyed a telephone service monopoly in many areas, and used cross-subsidization to expand the number of rural telephone connections rapidly, at a rate of about ten percent per year before 1999. *See id.* at 7 (also describing how competition and governmental reform ended cross-subsidization trend, prompting China Telecom to decrease investment in rural networks, which led rate of growth of rural connections to plummet to two percent after 1999).

566. *See* Xia & Lu, *supra* note 563, at 4 (stating that although China's telecommunications industry is now structurally competitive, where the northern and southern companies are now respectively referred to as China Netcom and China Telecom, meaningful competition remains elusive).

567. *See China Telecom Reports 2004 Profit*, CHINA DAILY, Apr. 21, 2005, http://english.people.com.cn/200504/01/eng20050401_179018.html (adding that the number of Telecom's broadband subscribers rose to 13.84 million and is expected to grow); Stephen D. Simpson, *Is Broadband Working for China Netcom?*, MOTLEY FOOL, Sept. 12, 2005, http://www.fool.com/News/mft/2005/

None of this is to say that the United States lags behind the world average in broadband connectivity, far from it. While half or more of Americans and Scandinavians have Internet access, less than one percent of people in many African and Asian countries enjoy access.[568] Outside of South Africa, in 2000 there was only one person with Internet access in Africa out of every five thousand people.[569] As World Bank President James D. Wolfensohn acknowledged, "hundreds of millions of people living in Central Asia, Latin America [and] Africa [may] be cut off from the ideas changing the rest of the world . . . simply because of a lack of readily available cable or satellite technology."[570]

4. Municipal broadband represents a sound investment

Critics of municipal broadband have cast such projects as financially disastrous drains on the public treasury.[571] Opponents argue that municipal broadband has thus far required enormous per-user subsidies, and its prospects are indefinite unprofitability.[572] For example, studies released by a think tank financially supported by a variety of Baby Bells, cable companies, technology, and Internet companies concluded that existing municipal broadband projects are heavily dependent on tax dollars for subsidization.[573] These critics

mft05091213.htm (noting that Netcom's broadband subscriber growth was nearly 85% in the first half after the Chinese government split China Telecom into two divisions).

568. United Nations Statistics Division, *Millennium Indicators Database, Internet Users Per 100 Population* (Jan. 19, 2005), http://unstats.un.org/unsd/mi/mi_series_results.asp?rowId=605.

569. *See* J.M. Spectar, *Bridging the Global Digital Divide: Frameworks For Access and the World Wireless Web,* 26 N.C.J. INT'L L. & COM. REG. 57, 62 (2000) (describing that nearly 90% of the one million Internet users in Africa lived in South Africa, and among those who do not live in South Africa, the number of Internet users was very low compared with "one user per every thirty-eight people worldwide and one in five people in the West").

570. James Wolfensohn, *A Call to Action in a Global Economy* (Apr. 13, 2000), http://www.globalpolicy.org/socecon/bwi-wto/wbank/bankpres.htm.

571. *See* Adam D. Thierer, *Risky Business: Philadelphia's Plan for Providing Wi-Fi Service*, PROGRESS ON POINT 12.4, at 2, 14-16 (2005), http://www.pff.org/issues-pubs/pops/pop12.4thiererwifi.pdf (describing indirect opportunity and long-term costs associated with municipal entry into telecom business, as well as risk of public bailout after municipalities lock-in to specific broadband technology in the face of technological change and market uncertainty).

572. *See* Thomas Lenard, *Government Entry into the Telecom Business: Are the Benefits Commensurate with the Costs?,* PROGRESS ON POINT 11.3, at 2 (2004), http://www.pff.org/issues-pubs/pops/pop11.3govtownership.pdf (claiming that subsidies range from $350 to over $1,000 per customer, excluding capital costs, causing "indefinite drain" on taxpayers).

573. *See id.* (declaring that municipally owned entrants into telecom business in Virginia, Pennsylvania and Oregon were unable to "cover costs without being subsidized," thereby absorbing surpluses of other municipally owned utilities and restricting their ability to decrease taxes); Thomas Lenard, *Wireless Philadelphia: A*

add that a better way to bridge the digital divide would be to subsidize computer purchases, rather than high-speed Internet access.[574] By marketing broadband Internet access, cities could easily become stranded with obsolete networks and equipment, as innovation passes them by and their substantial investments are lost.[575] Moreover, some critics also assert that broadband subsidies divert scarce public funds away from other important governmental functions.[576]

The problem with many of these critiques is that they aim to assess the success or failure of municipal broadband projects in terms of profitability or "losses," rather than savings to consumers, services delivered to residents, economic growth, or improvements in education, public safety, or delivery of health care.[577] As the APPA has pointed out, public provision of essential services, such as electricity, generally saves consumers substantial amounts of money.[578] Cities and counties have a long history of spending tax dollars on beneficial

Leap Into the Unknown, PROGRESS ON POINT 12.3, at 12 (2005), http://www.pff.org/issues-pubs/pops/pop12.3lenardwifi.pdf (adding that municipal telecom entrants have "generally not been successful in covering costs or returning the taxpayers' investments," as in Kutztown, Pennsylvania, where the mayor proclaimed that taxpayers were "subsidizing the system for too few paying customers"); Thierer, *supra* note 571, at 11-12 (stating that towns in Georgia and Iowa sustained losses on their broadband networks even after subsidies contributed over $20 million). For information on funding of the Progress and Freedom Foundation, which employs Mr. Lenard, see Progress and Freedom Foundation, *Supporters* (2006), http://www.pff. org/about/supporters.html.

574. *See* Lenard, *Wireless Philadelphia*, *supra* note 573, at 13 (arguing that municipalities may spend a lot of money implementing broadband service and never achieve their social objectives due to drain on the budgets and the creation of an unattractive business environment).

575. *See* Executive Summary, *in* NMRC, *supra* note 28, at viii (noting that profits from municipal networks will likely be diverted to other city obligations instead of allocated for technology research and development to continually upgrade network).

576. *See id.*; *see also* Frank Rizzo, *Philadelphia's Big Dig*, CNET NEWS.COM, Feb. 17, 2005, http://news.com.com/Philadelphias+Big+Dig/2010-1071_3-5579848.html (arguing that Philadelphia's municipal broadband project threatens to divert funds from a "shrinking budget needing to accommodate ever increasing social needs," and that other state and local governments have lost tens of millions of dollars on telecommunications networks).

577. *See* Feld, *supra* note 527, at 1 (declaring that "municipal broadband plays a critical role in making the goal of universal deployment a reality" as it keeps rates low and quality of service high, increases investment in local communities, and is better able to meet community needs regarding health, education and welfare issues, unlike private companies which work to maximize profit); *id.* at 15 (stating that "profitability cannot become the sole yardstick for success" because, for example, hospitals that receive public subsidies are still considered successful if they provide health care for the poor).

578. *See* APPA, *Community Broadband: Separating Fact From Fiction*, at 21 (2004), http://www.appanet.org/files/PDFs/BroadbandFactFiction.pdf ("During 2002 (the latest data available) the average electric rates paid by customers of investor-owned utilities were 13 percent above those paid by customers of public power systems.").

local infrastructure improvements, which provide their residents with such modern amenities as electricity, natural gas, transportation, drinking water, sewage treatment, trash removal, and other services that private industry could also provide.[579] Municipal entry into electricity was generally successful, with public utilities providing service more efficiently and at lower rates than private utilities.[580]

By entering into the broadband market, municipalities are bestowing economic and non-economic benefits on citizens and businesses alike. For example, municipal high-speed Internet service can cost about half of the $50 that many cable companies charge for comparable access.[581] In fact, one municipal broadband and cable TV network alone saved local consumers over $30 million.[582] Municipal broadband and Wi-Fi, among other virtues, can save cities tens of millions of dollars in telephone and Internet fees, and be critical components of a city's strategy for disaster-preparedness, particularly in maintaining communications during post-disaster electrical and telecommunications blackouts.[583] Although some municipal

579. *See, e.g.*, CALIFORNIA PUBLIC UTILITIES COMMISSION, *supra* note 29, at § 8.3.2, http://www.cpuc.ca.gov/PUBLISHED/COMMENT_DECISION/43597.htm (noting that the government has provided specific services, in part because they were deemed essential, and a number of local governments have classified high-speed Internet access as essential, thereby justifying investment in public broadband networks); W. Mark Crain & Asghar Zardkoohi, *A Test of the Property-Rights Theory of the Firm: Water Utilities in the United States*, 21 J.L. & ECON. 395, 396-99, 405-06 (1978) (analyzing the differences between publicly and privately owned enterprises); Van Wart, Rahn, & Sanders, *supra* note 472, at 132, 143 n.1 (stating that "public enterprises began in basic infrastructure . . . in the late 1700s" and later shifted focus to include other services such as gas and electric utilities at the turn of the century, and eventually social welfare and economic development projects after WW II).

580. *See* Carlson, *supra* note 31, at 30 n.154, 31 n.159 (citing scholarly studies which assert that average rates for privately owned electric utilities were at least ten percent higher than for publicly owned utilities, with efficiency gains ranging from 6.4% to 25.5%); Feld et al., *supra* note 527, at 15 n.57 (providing numerous citations to economic research on municipal and public electric and water utilities).

581. *See* APPA, *supra* note 578, at 22 ("In a 2002 random sampling of 12 public power utilities, the median price of high-speed, residential, Internet service (cable modem) was $29.45 with average offering of 2.2 megabits per second."). The price of cable modem access from a private cable company in 2002 was closer to $50. *See Behind the High-Speed Slowdown*, BUS. WK. ONLINE, Sept. 17, 2002, http://www.businessweek.com/technology/content/sep2002/tc20020917_2824.htm (reporting that the average price for cable modem service in June 2002 was $45.31 a month).

582. Alliance for Public Technology & The Benton Foundation, *A Broadband World: The Promise of Advanced Services* (Feb. 2003), http://www.benton.org/ publibrary/ broadband/broadband-world.html.

583. *See* Richard Siklos, *What We Have Here Is a Failure to Communicate*, N.Y. TIMES, Oct. 30, 2005, Section 3 at 3 (Philadelphia's chief information officer and architect of its Wi-Fi plan estimates that city will save up to $2 million each year on data charges); Clive Thompson, *Talking in the Dark*, N.Y. TIMES, Sept. 18, 2005, Section 6 at 24-28 ("disaster-preparedness experts" are exploring ways to use Wi-Fi networks for backup communications during disasters like the collapse of the World Trade Center

broadband providers may fail to turn a profit, and careful analysis and planning is surely necessary to prevent unwise investments from being made, the fact that municipal broadband may not always be profitable is not a sufficient reason to ban it outright. Like a school, university, library, or hospital, a city-supported broadband or Wi-Fi network can be a success despite rarely or never generating a positive cash flow.[584]

Furthermore, the common criticism of municipal broadband as overly reliant on subsidies fails to account for the fact that the cable and DSL companies have received billions of dollars of subsidies in their own right. Starting in the 1990s, the cable and DSL providers have won billions in federal, state, and local subsidies in exchange for promises of universal service that have not always been fulfilled.[585] In Florida alone, the dominant telephone companies received over $80 million in direct federal subsidies in 2004, and nearly $400 million over the five years leading up to 2004, yet "robust broadband service" still is unavailable in many small and rural Florida communities.[586] Thus, among the critics of municipal broadband are some of the most-subsidized private companies in the United States.[587] Until it is established that private companies spend the proceeds of public subsidies more wisely than cities or counties, the fact that the latter may require subsidies to start up or continue broadband projects should not constitute a persuasive objection to their doing so.

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or Hurricane Katrina, because unlike landline and mobile phone systems, Wi-Fi mesh does not have a single weak point); *Broadband Beat: A One-Item Holiday Wish List: Broadband for All*, ONLINE REPORTER, Dec. 17, 2005, at 7(2) ("free wireless broadband network in every city, town and village" could serve as "a universal communication system" for "first responders").

584. *See* Feld et al., *supra* note 527, at 15 (noting that hospitals which receive public subsidies and convention centers which go over budget are still considered successful if they provide a service to the community).

585. *See* FMEA, *supra* note 3, at 17 (comparing Bell company promises to connect 44 million homes to broadband and other advanced networks by 2000, with reality that only 500,000 households were in fact connected to such networks by 2000).

586. *Id.* at 12-13.

587. *Id.* at 13; Siklos,, *supra* note 583, Section 3, at 3 (noting that Comcast received $30 million subsidy to build its corporate headquarters). The U.S. Senate Committee on Commerce, Science, and Transportation recently authorized an additional $500 million in subsidies to "finance broadband deployment to unserved areas." U.S. Senate Committee on Commerce, Science, and Transportation, *Committee Approves Communications Reform Bill* (June 28, 2006), http://commerce.senate.gov/public/index.cfm?FuseAction=PressReleases.Detail&PressRelease_id=248635&Month=6&Year=2006. The fund, it appears, will be made available to private as well as public "facilities-based providers of broadband service" so long as they satisfy applicable eligibility requirements. Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 252(c)(3)(A) (2006).

5. Federal preemption of impediments to municipal broadband should extend to state constitutional restrictions

At least one eloquent supporter of municipal broadband projects has contended that while all state statutory limitations should be preempted, state constitutional limitations should not be, out of respect for state sovereignty.[588] He argued that when state judges deny municipalities the authority to provide public services unless expressly permitted to do so by their state legislatures, section 253(a) of the 1996 Act is not offended in the way that it is by state legislation banning municipalities from entering telecommunications markets.[589] Finding federal preemption to operate in these Dillon's Rule states would turn federalism on its head, he concluded.[590]

The balance between federal antitrust and telecommunications policy on the one hand, and state sovereignty on the other, is better struck by preserving state regulatory authority over municipal broadband projects, rather than by refusing to apply federal preemption altogether. From the standpoint of competition policy, there is no basis for distinguishing between state statutes outlawing municipal broadband and state judicial prohibitions of municipal broadband using Dillon's Rule.[591] Federal legislation preempting anticompetitive state laws outlawing municipal broadband also does not violate state sovereignty, because it merely establishes "federal standards regulating [a state's] activity" in interstate commerce, namely operation of state utilities, rather than commandeering states to implement federal regulations of private conduct.[592] For those

588. *See* Carlson, *supra* note 31, at 53-55 (asserting that the 1996 Act compels the FCC to preempt state laws but not restrictions arising from legislative inaction in states that follow Dillon's Rule because state sovereignty dictates the latter).

589. *See id.* at 55-56 (claiming that pursuant to section 253(a) of the 1996 Act, the FCC was mandated to preempt laws that restrict competition, however in Dillon's Rule states there are no laws specifically restricting municipal entry into telecommunications market).

590. *See id.* at 55 (arguing that if the 1996 Act preempts Dillon's Rule, it would improperly establish the federal government as a source of power for municipalities, thereby raising Tenth Amendment concerns by fundamentally changing the balance of power between state and federal governments).

591. Like state statutes outlawing municipal entry into broadband markets, restraints on such entry promulgated by state courts pursuant to Dillon's Rule "have the effect of prohibiting any public provider from providing, to any person or any public or private entity, advanced communications capability or any service that utilizes the advanced communications capability provided by such provider." Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(c) (2006).

592. *See, e.g.*, Reno v. Condon, 528 U.S. 141, 150-51 (2000) (holding that Congress did not exceed Commerce Clause power or violate Tenth Amendment by requiring states to respect the privacy of drivers registering with state instrumentalities, i.e. state motor vehicle departments, and not to sell drivers' personal data to businesses); EEOC v. Wyoming, 460 U.S. 226, 243 (1983) (holding that Tenth Amendment was

inclined to implement federal telecommunications policy in a way that preserves state sovereignty as much as possible, a better solution would be to permit state regulation and management of municipal broadband in the public interest, but not the total suppression of municipal broadband.[593] This is the balance that some federal courts tried to strike prior to the Supreme Court's strained interpretation of section 253(a), and it will better serve the goal of universal access.[594]

CONCLUSION

Making universal and affordable high-speed Internet access a reality in the United States will require bold steps to accelerate innovation and conquer local duopolies. Cities and counties are currently leading the next wave in Internet infrastructure deployment: the establishment of fast, cheap, ubiquitous Internet service on a wireless basis.[595] In too many states, however,

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not violated by federal law requiring states to treat their older employees equally and not discriminate against them); Cutter v. Wilkinson, 423 F.3d 579, 584, 589 (6th Cir. 2005) (holding that Tenth Amendment was not violated by federal law requiring state prisons to provide inmates adhering to non-mainstream religions with "access to literature and ritual items and . . . a chaplain trained in their religions"); Nebraska v. EPA, 331 F.3d 995, 997-99 (D.C. Cir. 2003) (holding that Tenth Amendment was not violated by federal law requiring states' public drinking water systems to remove arsenic from water); City of Abilene v. EPA, 325 F.3d 657, 661, 663 (5th Cir. 2003) (holding that neither the Commerce Clause nor the Tenth Amendment was violated by federal environmental regulations that "regulated [cities] in the same manner as other dischargers of pollutants."); Freilich v. Upper Chesapeake Health, 313 F.3d 205, 214 (4th Cir. 2002) (holding that Tenth Amendment was not violated by federal statute requiring state officials and health care providers to collect and report information about incompetent physicians to federal government, because fact that "'a State wishing to engage in certain activity must take administrative and sometimes legislative action to comply with federal standards regulating that activity is a commonplace that presents no constitutional defect.'") (internal citation omitted) (quoting South Carolina v. Baker, 485 U.S. 505, 514-15 (1988)); City of Bristol v. Earley, 145 F. Supp. 2d 741, 750 (W.D. Va. 2001) (holding that Tenth Amendment was not violated by section 253(a) of 1996 Act because Commerce Clause is express grant of power to Congress over interstate commerce, including the telecommunications industry), *appeal sub nom.* Beales v. City of Bristol, Nos. 01-1741(L) and 01-1800 (4th Cir.), *vacated as moot*, May 1, 2002.

593. *See* Communications, Consumer's Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 502(d) (2006) (setting forth antidiscrimination safeguards requiring public providers to subject themselves to regulations they imposed, or which are imposed by state or local laws, on similarly situated privately-owned providers).

594. *See, e.g.*, Missouri Municipal League v. FCC, 299 F.3d 949, 953-55 (8th Cir. 2002) (holding that Congress may lawfully alter "a state's authority to regulate its municipalities . . ."); *City of Bristol*, 145 F. Supp. 2d at 748 (Congress intended to preempt state laws that "stifle competition" by erecting "barriers to [municipal] entry into the telecommunications field").

595. *See, e.g.*, *Newsom Calls for "Revolution of Solutions," supra* note 10 (describing San Francisco's plan to provide wireless Internet service to all citizens); *Wireless Philadelphia Business Plan*, *supra* note 11 (describing Philadelphia's plan to provide wireless Internet service for $20 a month throughout the city); *The Big Apple Goes*

anticompetitive laws reinforce local cable and DSL duopolies and block municipalities from supporting broader high-speed Internet access.[596]

Federal legislation is needed to overrule the Supreme Court's ruling in *Missouri Municipal League*, and to ensure that all laws banning municipal entry into Internet access are preempted as contrary to the overriding federal policies of uninhibited competition and universal provision of telecommunications services of equally high quality. Fortunately, members of Congress have already proposed such legislation in the form of the Community Broadband Act of 2005, which is being folded into broader telecommunications reform legislation.[597] To break down structural and economic barriers to broadband entry, and to overcome our nation's gaping digital divide in access to high-speed Internet service, Congress should enact such a ban on anticompetitive state laws.

The federal courts must also be more faithful to the compromises worked out in Congress between private industry and the public interest. Cases like *Trinko* and *Brand X* represent surprising upsets to pro-competitive regulatory and antitrust policies Congress put in place in the 1996 Act. In both *Trinko* and *Brand X*, the Supreme Court's action unnecessarily reinforced barriers to competitive entry.[598] Congress should act to lift these barriers by legislating an open and competitive environment for city-supported broadband and Wi-Fi networks. Let us hope that any such legislation is not rendered moot by judicial decree.

Wireless, *supra* note 12 (describing New York's plan to build a wireless network blanketing Manhattan).

596. *See* California Public Utilities Commission, *supra* note 29, at Appendix B (listing more than thirty states with limited municipal deployment of broadband services).

597. *See supra* notes 39, 376.

598. *See* Scheuermann, *supra* note 283, at 15 (arguing that the decision in *Trinko* is incompatible with the 1996 Act's antitrust savings clause); Public Knowledge, *Brand X Decision Chills Competition* (June 29, 2005), *at* http://www.publicknowledge.org/news/intheknow/newsletter.2005-06-29.0579387602 (arguing that "the result in the *Brand X* case will ensure less competition in the provision of broadband access").