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WORKSHOP ON BROADBAND CONNECTIVITY COMPETITION POLICY
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I want to thank the Commission for giving me the opportunity to discuss this important subject.¹ The issues raised in this panel are among the most important that the workshop will address because they affect consumers so directly. I am delighted to participate in this discussion.

The Internet has undergone a massive transformation in a short time. In forty years, the Internet has evolved from a military research project to a worldwide communication network linking over 1 billion people. As the Internet has evolved, so has the regulatory environment, particularly for consumers. Ten years ago, when consumers used ordinary telephone lines to access the Internet through dial-up connections provided by the likes of CompuServe, AOL, and others, the telephone companies that provided those services did so subject to common-carrier regulations of the Federal Communications Commission (“FCC”). When the FCC classified broadband services, such as Digital Subscriber Line (“DSL”) and cable-modem access, as “information services,” these common-carrier regulations did not apply. The deregulatory environment for broadband has resulted in Internet access providers investing substantially in their networks to provide consumers with better access to existing services and broader access to emerging ones.

As the Federal Trade Commission (“FTC” or the “Commission”) observed in the press release announcing this workshop, the absence of a regulatory regime for broadband access to

¹ I am the Foundation Professor at the George Mason University School of Law, currently serve as Co-chair of the Antitrust Practice Group at O’Melveny & Myers LLP, and served as the Chairman of the Federal Trade Commission (2001-2004). The views expressed herein are my own; however, I have counseled Verizon Communications, Inc. on issues related to this workshop.

the Internet has caused great debate. Some believe that the Federal government should regulate the business of providing consumers broadband access. Without regulation, they fear that access providers might charge unaffiliated content providers fees for delivery of content or block consumer access to certain information. Others take a different view, arguing essentially that competition will better anticipate consumer demand than regulation, and that existing legal tools are sufficient to combat whatever problems may arise.

This workshop raises broad and important concerns about the proposed new regulatory regime for the Internet. In my view, the Commission can play a very important role in helping the Congress and other policy makers understand the impact of regulation on consumers. Although the government plays an important role in establishing the conditions under which competition can flourish, some government actions do not advance the interests of consumers as a group. The call for a new regulatory regime for the Internet is in that category and, thus, I fall squarely in the camp of people who oppose legislation to mandate “Network Neutrality.”

This panel has been asked to consider one strand of this larger debate – consumer protection. The Commission has posed several questions about whether, acting through normal market forces, consumers can police the actions of the firms that provide Internet access and whether there are other consumer protection issues at stake in the debate about the creation of a new regulatory regime for the Internet. My answer to the questions posed for this panel can be captured by a single word: competition. This industry appears strikingly innovative and competitive, making it hard to believe that problems will occur of the sort advocates of a new regulatory regime imagine. The market for broadband access not only gives consumers a choice of providers, but it also produces a wide choice of options (i.e., speed, mobility, and price).

For any problems that occur, existing consumer protection and competition law would seem sufficient to correct them. There is no existing evidence of problems, and the push for a new regulatory regime for the Internet is ill-defined. The proposed broadband regulation would harm consumers by limiting the ability of network providers to invest in their networks and develop innovative solutions to meet consumers' increasing demands for high-speed access to broadband content and applications.

To support these conclusions, Part I of my testimony explains why the FTC's rich history of engaging in competition research and development and protecting consumers makes it well-positioned to examine the impact of broadband regulation on consumers. Part II of the testimony frames the debate about broadband access within the context of the rapid evolution of the Internet over the past four decades. In Part III, I discuss why robust competition for access to the Internet and a lack of any appreciable evidence that consumer protection problems exist counsel against a new regulatory regime. Finally, Part IV explains the characteristics that make broadband a two-sided product and why government intervention in this market would likely harm consumers.

I. THE FTC'S UNIQUE MANDATE TO SHAPE COMPETITION AND CONSUMER PROTECTION POLICIES

The FTC's mandate to protect consumers extends well beyond law enforcement to include competition advocacy through information gathering and reporting on major policy and enforcement issues.² The FTC's mandate to protect consumers has led the Commission to establish an agenda based on fundamental principles concerning the role of regulation in the

² See Marc Winerman, *The Origins of the FTC: Concentration, Cooperation, Control, and Competition*, 71 ANTITRUST L. J. 1, 93 (2003).

marketplace. The FTC has a rich history of competition research and development. By initiating studies, holding workshops, and issuing reports, the Commission has explored a broad range of issues.

For example, in 2002, the FTC initiated a study on the availability of wine for purchase over the Internet. The study included a workshop to gather testimony from key industry players and an empirical study on the wine market in Virginia, a state that banned interstate direct shipping.³ The FTC then issued its Wine Report, concluding that a state ban on the direct shipment of wine reduced the “varieties of wine available to consumers” and prevented them from “purchasing certain premium wines at lower prices online.”⁴ The Report had an immediate impact on legislative policy. After the Report was issued, the FTC testified about it at hearings held by the U.S. House of Representatives Subcommittee on Commerce, Trade, and Consumer Protection and in several state legislatures. The Supreme Court also cited the Report extensively in overturning two state laws that barred out-of-state wineries from shipping directly to consumers.⁵ Thus, the Court emphasized the Report’s findings that “consumers reap significant benefits from direct [wine] shipment in states that permit it.”⁶

Given the FTC’s mandate to study issues and make recommendations, as it did so successfully with the wine report, it is clearly well-positioned to consider potential problems in the broadband arena. The FTC has used competition advocacy to develop agency expertise on emerging issues and assess the impact of evolving industries on the economy and the need for

³ See Maureen K. Ohlhausen, Acting Dir., Office of Policy Planning, Fed. Trade Comm’n, Competition Advocacy: The Impact of FTC Staff Reports on Barriers to E-Commerce in Contact Lenses and Wine (Apr. 12, 2005).

⁴ Timothy J. Muris, Chairman, Fed. Trade Comm’n, Remarks at The Progress and Freedom Foundation Aspen Summit on Cyberspace and the American Dream (Aug. 19, 2003).

⁵ See *Granholm v. Heald*, 125 S. Ct. 1885 (2005).

⁶ Charles Lane, *Justices Reject Curbs on Wine Sales*, WASHINGTON POST, May 17, 2005, at A01.

FTC action. Initiating studies to increase the agency's knowledge base is vital to addressing dynamic industries and complex technical issues and responding to new technologies.

In addition to shaping competition policy, the FTC has placed a high priority on protecting consumers' privacy, especially safeguarding their sensitive personal information. The recent debate over privacy showed clearly the importance of relying on strong principles to guide the FTC through new territory. Grappling with the issues required careful consideration of the basic questions of common law: why should the government protect privacy, and what role should the government play in defining and enforcing privacy rules for private exchange? Strong principles were needed to ensure that the Commission understood the issues and appreciated the possible harm from unduly restricting the many consumer benefits of the information economy.

When I arrived at the Commission, privacy was defined by the so-called Fair Information Practices — notice about information collections and sharing, choice about how the information is used, and access to information that companies may have about the consumer.⁷ Despite its superficial appeal, while Chairman, I recognized the inadequacies of the Fair Information Practices approach. Most prominently, the widespread dissemination of financial privacy notices appears to have accomplished very little. As I often said during my chairmanship, for most Americans, these notices were as useful as “socks on a rooster.” The elaborate, statutorily mandated financial privacy notices explain information-handling practices — but very few consumers read them, and even fewer exercise whatever choice they might have. The premise of

⁷ See Federal Trade Commission, A Report to Congress: Privacy Online: Fair Information Practices in the Electronic Marketplace (May 2000), available at <http://www.ftc.gov/reports/privacy2000/privacy2000.pdf>.

notice and choice — that consumers will read and compare financial privacy notices to pick the financial institution that best matches their privacy preferences — was fatally flawed. Moreover, the notion that consumers should always be able to choose how their financial information is used is flawed as well. Vital information systems, such as credit reporting, simply cannot function if consumers with bad credit histories can choose not to have their information reported to potential lenders.⁸ In short, we introduced a new approach to privacy, one that focused more on real-world consequences and real consumer needs than on mandatory disclosure regimes.

II. THE INTERNET – AN ILLUSTRATION OF THE POWER OF CONSUMER DEMAND

The history of the rise of the Internet, or a “network of networks” as it was originally conceived, is highly relevant for this workshop. This history reveals the incredible power of consumer demand. Twice in the last four decades, consumers have caused a complete reinvention of the Internet. The current debate about broadband access is best understood within the context of the Internet’s stunningly rapid transformation from a Department of Defense research project to the hub of the global communication system.

A. The Rise and Fall of Military Control – 1969 to 1984

Following the launch of Sputnik, U.S. military leaders doubted whether the nation’s communications network could withstand Soviet attack. They asked computer scientists at RAND to develop a system to enable communication from point A to point Z even if some of the

⁸ Indeed, we recognized that consumers are perfectly willing to share information for practical benefits. They have no hesitation about the information-sharing that is essential to clear a check, use an ATM, or purchase a book from Amazon.com. When, for example, I use my Visa card to purchase a book on Amazon.com, several different firms might have access to my card number. If I were a particularly savvy consumer, I might be aware of the financial institution that issued my card, my Internet service provider, and Amazon.com. But this list omits at least two critical parties – the bank that Amazon.com uses to process payment card purchases and Amazon.com’s Internet service provider. In fact, the list is likely longer.

links in between were lost. The researchers at RAND devised an ingenious solution to this problem — a distributed network.

In the late 1960s, the Defense Advanced Research Projects Agency (“DARPA”), an agency within the Department of Defense, began to build a network based on this design. At the time, computer processing power was relatively scarce, and DARPA hoped that its network would enable researchers to use this scarce resource more efficiently. In its original incarnation, the network connected computers at four research institutions in the American west — University of California Los Angeles, Stanford Research Institute, University of California Santa Barbara, and the University of Utah. In 1969, under the watchful eyes of its military sponsors, the system went on-line. It promptly crashed.⁹

With that rather inauspicious debut, the Internet was born. It proved extremely popular; research institutions across the United States clamored to connect their computers to the network. By 1972, twenty-three institutions participated. New institutions brought new users to the network, and those users had new ideas. Much to the surprise of the Department of Defense and system administrators at various participating institutions, sharing computer resources quickly became a secondary activity as people primarily used the system to send electronic messages back and forth. By the end of the decade, a new “killer-app” had emerged — the discussion board. (It was immediately put to its apparent highest and best use — a discussion board devoted to science fiction.)

⁹ Charley Kline, the person commissioned to send the first message, reached only the third letter of his command before the system reset. See Zakon.org, Hobbes Internet Timeline v8.2, <http://www.zakon.org/robert/internet/timeline/> (last visited Feb. 27, 2007).

The newfound utility of the Internet stoked further demand for connection. This demand for connection, in fact, outstripped the ability of the original Internet to meet it. Consumers, for example, could not directly access the Defense Department's original Internet. So commercial services, such as CompuServe, Prodigy, and AOL, filled the gap. They created gateways for consumers to send email and access discussion boards via dial-up modem connections. In 1981, the National Science Foundation ("NSF") created a new network for institutions that could not connect to the Internet. The new NSF network was bigger and faster than the network run by the Department of Defense. By 1984, the two networks had effectively merged, and the Defense Department had ceded administrative authority to the NSF.

B. From Public Research Tool to Commercial Enterprise – 1984 to Present

When the NSF began administering the Internet, it was formally closed to commercial traffic. Research institutions, non-profits, and government agencies were the only formally authorized users. Consumers could exchange email and files with others connected to the Internet, but they could not connect directly to the system. This began to change in the late 1980s and early 1990s. Internet access became a feature of life for most, if not all, college students, and many looked for ways to remain connected when their academic careers ended.

This expanding pool of users again brought unanticipated demands to the system, including for more convenient ways to access the information located on the various computers that made up the Internet. In 1992, Marc Andreessen responded to this demand by creating a program that provided a new way to access information on the Internet — the web-browser. Within three years, the Internet was completely transformed. Andreessen's application demanded

much more bandwidth and delivered much more interesting content than its predecessors.¹⁰ It prompted a massive push from the commercial world to join what had been the exclusive domain of academics and technophiles. This shift also prompted the NSF to exit the business, and in 1995, the NSF stopped allowing direct access to its network. To replicate the interconnection that its network had provided, the NSF established points at which commercial providers could exchange traffic with themselves. As commercial traffic grew, those public interconnection points gave way to private arrangements among the firms that handle the vast majority of Internet traffic, *e.g.*, AT&T, Verizon (through its acquisition of MCI), Sprint, Level 3, Qwest, Global Crossing, SAVVIS, and Cogent.

In the early 1990s, widespread adoption of TCP/IP, the set of Internet communications protocols, gave the Internet almost universal interoperability.¹¹ With TCP/IP, it became possible to connect networks, no matter what their characteristics, through a router and pass packets of information between them, albeit on a first-come, first-served and best-efforts basis with no guarantee of success.¹² It allowed millions of consumers to access Internet applications and content.

In the mid-1990s, demand shifted from text-based applications to include more bandwidth-intensive applications, like webpage downloads and file transfers.¹³ Until fairly recently, consumers who wanted to get access to the Internet only had one choice — a dial-up modem and a contract with a service provider like AOL, CompuServe, or their local equivalents.

¹⁰ See Christopher Yoo, *Beyond Network Neutrality*, 19 HARVARD J.L. & TECH. 1, 21 (Fall 2005).

¹¹ See Yoo, *Beyond Network Neutrality*, 19 HARVARD J.L. & TECH. at 3.

¹² See Wikipedia.org, Internet protocol suite, <http://en.wikipedia.org/wiki/TCP/IP> (last visited Feb. 27, 2007); Yoo at 8.

¹³ See Yoo at 21.

Each service provider operated on basically the same model. They established modem banks and relied on local phone companies to connect the in-bound calls from their subscribers. Consumers quickly found that dial-up access could not provide the bandwidth necessary to meet their demand for the then-cutting edge content and applications. Consequently, as the content delivered on the web shifted from static images to more bandwidth intensive applications, consumers began shifting from dial-up to higher speed connections.

By the end of the 1990s, as consumers began to switch to broadband access, growing demand for electronic mail and more dynamic web browsing encouraged the emergence of yet more content providers. These companies sought to take advantage of this rapidly transforming demand and use the Internet to reach millions of consumers. As consumer demand grew, forward-looking network operators began dramatically increasing capacity by increasing the availability of fiber optic cable.¹⁴ Thus, by 2000, the cycle of Internet demand that exists today had emerged. Anticipating consumer demand for faster access, network providers are building better, more attractive means for new consumers to access the Internet. Then, content providers can take advantage of those new and better networks to create more dynamic and data intensive web content. This, in turn, attracts new consumers and creates the demand for more bandwidth and quicker access to the Internet.¹⁵ This virtuous cycle is typical of industries characterized by network externalities and has led to the unprecedented growth that characterizes today's Internet.

¹⁴ See Michael Kende, *The Digital Handshake: Connecting Internet Backbones* 14, (Office of Planning & Policy, Fed. Commc'ns Comm'n, Working Paper No. 32, 2000).

¹⁵ Over 50% of U.S. Internet consumers have broadband access. See *Broadband Access Alters Lifestyles; Enhances Consumers' Overall Engagement with Multiple Media According to Yahoo! & Mediaedge*, BUSINESS WIRE, Apr. 19, 2005, http://www.findarticles.com/p/articles/mi_m0EIN/is_2005_April_19/ai_n13631182.

III. CONSUMERS DO NOT NEED A NEW REGULATORY REGIME FOR BROADBAND

It may seem odd to use competition to answer questions about consumer protection. Because many of you have heard me speak about the so-called three-legged stool of competition, common law, and consumer welfare law (defined to include competition policy as well as consumer protection law), I hope that my answer is not a complete surprise. For those unfamiliar with my approach to this subject, in this section let me first briefly summarize my thoughts about the system of institutions for protecting consumers in the American economy and how they interrelate. Then, I will discuss how competition in the market for broadband access is robust, resulting in lower prices, increased quality of service, and innovation. Proponents of broadband regulation have shown no evidence of a consumer protection problem in this highly competitive market.

A. A Brief Description of the Three-Legged Stool for Consumer Protection in the American Economy

One can envision the American system of consumer protection as a three-legged stool. The first leg represents competition based on free enterprise and open markets in which producers compete to offer the most appealing mix of price and quality. This competition spurs producers to meet consumer expectations because the market generally imposes strict discipline on sellers who disappoint consumers and thus lose sales to producers who better meet consumer needs. These same competitive pressures also encourage producers to provide truthful information about their offerings.

The second leg of the stool represents the legal structure of contract, property, and other private law that provides basic rules for interactions between producers and consumers. These

rights — and default rules provided by government, often through the courts — alleviate some of the weaknesses in the market system by reducing the consequences to the buyer arising from a problematic exchange. Because a two-legged stool would be unstable, these two legs better support the American economic system when buttressed by a third leg. Public agencies — entrusted to promote consumer welfare by preserving competition and protecting consumers — work as this third leg, reinforcing the other two.¹⁶

A properly functioning market offers the best possible protection for consumers. Markets work because participants are willing to engage in voluntary trades. Setting aside fraud and transaction costs for a moment, we can be confident that a given consumer will not contract with a given producer unless the consumer sees some gain in the deal. A buys a service from B for \$X because the value of the service to A exceeds the cost. Likewise, B accepts \$X because the price exceeds the cost of production. Introducing new sellers — *i.e.*, competition — can only improve things from the consumer’s perspective. Either the new producer offers the consumer a better deal (*e.g.*, lower price, better quality), or it does not get the sale. This ability to shift expenditures imposes a rigorous discipline on each seller to satisfy consumer preferences.

Competition law is essential in maintaining the necessary framework to realize the full benefits of free and unfettered markets. Competition policy ensures that firms in a free market act competitively and do not act either unilaterally or collectively to harm consumers.¹⁷

¹⁶ The analogy of the three-legged stool is drawn from Todd J. Zywicki, *Bankruptcy Law as Social Legislation*, 5 TEX. REV. L. & POL. 393, 400 (2001), which applies it in a different context.

¹⁷ See Jerry Ellig, Ph.D., Senior Research Fellow, Mercatus Ctr., George Mason Univ., Written Testimony Submitted to the United States Senate Committee on Commerce, Science, and Transportation (Mar. 30, 2006) (“If the policy goal is overall consumer welfare (as opposed to benefits for some particular segment of the communications industry, or satisfying some type of ideological objective), then competition could normally be expected to protect consumers.”).

Antitrust enforcement agencies charged with enforcing the competition laws help maximize social welfare and increase economic growth by protecting the free market process.¹⁸ The firms that satisfy consumer demand by offering high-quality, innovative products at competitive prices will survive, while those that cannot will fail. Ultimately, consumers choose the winners and losers in a competitive marketplace. Regulators should protect the benefits of the competitive process, not determine outcomes. A well-known example of the benefits of competition law involves conspiracies that harm consumers by insulating firms from the pressure of competition. Firms that fix prices with competitors do not lower price or improve quality to attract consumers. Consumers lose the benefits of market competition. By combating such conspiracies, an effective competition policy can make consumers better off and deliver the promised benefits of rigorous competition.¹⁹

Effective consumer protection policies banning fraudulent and deceptive practices serve a similar purpose. In the real world, both transaction costs and fraud affect markets. Competition motivates sellers to provide truthful, useful information about their products²⁰ and drives them to fulfill promises concerning price, quality, and other terms of sale.²¹ To the extent that a firm

¹⁸ See Gerald F. Masoudi, Deputy Assistant Attorney Gen., Antitrust Div., United States Dep't of Justice, Speech Presented to Taiwan 2006 International Conference on Competition Policies/Laws: Promoting Economic Development Through Sound Competition Policy (June 20, 2006) ("Protecting competition, and thereby promoting consumer welfare, helps to further economic growth.").

¹⁹ Obviously antitrust involves more, but stopping restraints among competitors that harm consumers, including certain mergers, remains its heart.

²⁰ See, e.g., Paul H. Rubin, *Regulating Deception*, 10 CATO J. 667, 679 (1991) ("There is much support in the recent literature for the proposition that, as long as deception is not allowed, there are incentives for sellers to disclose even the negative attributes of their products. This is because consumers will rationally assume that any advertisement which omits a critical piece of information (say, the durability of a product) will imply that the value of that attribute for that product is at the lowest level."). See also J. Howard Beales, III, et al., *The Efficient Regulation of Consumer Information*, 24 J.L. & ECON. 491, 502 (1981).

²¹ See, e.g., Lester G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27 (1980) (noting that when a stream of benefits from repeated interaction is promised, and that stream of benefits would be lost by acting

depends on repeat business, it will not have any interest in concealing or misrepresenting the truth about its products. In a competitive market, a consumer deceived by one seller on one purchase can always turn to a different seller the next time. But not every market involves repeat sales, and trusted advisers, such as private institutions that provide third-party evaluations (*e.g.*, Consumer Reports), do not always fill the gap. In these instances, consumer protection law and policy will reduce the incentive to deceive and enable markets that might not otherwise exist to function.

A consumer protection regime also helps to fill in gaps in common law. The triad of property, contract, and tort law provides a basic set of legal rules permitting ownership, voluntary transference, and protection from involuntary transactions. One of the most useful roles for the government is to provide what are called default rules — terms that apply when the parties do not explicitly specify otherwise. When contracts are formed, even in the most complex transactions, parties cannot contemplate every opportunity or do not always find it useful to define the terms for every contingency possible.

Both consumer protection and competition serve the common aim of improving consumer welfare, and they naturally complement each other. A focus on competition theory that excludes consumer protection is not only shortsighted but, given the growing importance of consumer issues, can ultimately be self-defeating. Consumer protection policy that ignores the impact on competition can result in a cure worse than the disease. The true measure of our contribution to the economy is our progress in increasing consumer welfare overall. Thus, well-

opportunistically, it is in a party's self interest to forego the one-time gain of opportunism in favor of preserving the prospect of a future stream of benefits).

conceived competition and consumer protection policies should take complementary paths to the goal of promoting consumer welfare.

It is important to note that the FTC possesses broad jurisdiction to address many issues it faces. Thus, the FTC's jurisdiction to prevent "unfair methods of competition" and "unfair or deceptive acts or practices" extends to most sectors of the economy.²²

B. No Evidence of a Consumer Protection Problem

The government's deregulation of the broadband industry has resulted in increased levels of investment in underlying network infrastructure and the emergence of new broadband network providers. Advocates of a new regulatory regime for the Internet are trying to turn back the clock. From my perspective, the case for regulatory intervention suffers from at least two major problems — problems that couching the issue as one of consumer protection do not solve.

First, there are a number of options available to consumers to access the Internet. As consumers abandon dial-up in favor of broadband access, telephone companies are no longer the only providers of access to the Internet. Cable companies and telephone companies compete head-to-head in much of the country to provide consumers with broadband access.²³ The technologies have very different costs and benefits, and neither has emerged as dominant. In addition, nearly everyone in the United States has access to satellite broadband service.²⁴ And as

²² Federal Trade Commission Act, 15 U.S.C. § 45 (a).

²³ See Press Release, Fed. Comm'n Comm'n, Fed. Comm'n Comm'n Releases Data on High-Speed Services for Internet Access (Jan. 31, 2007) (high-speed DSL and/or cable modem connections are present in 88% of Zip Codes).

²⁴ See Press Release, Fed. Comm'n Comm'n, Fed. Comm'n Comm'n Releases Data on High-Speed Services for Internet Access (Jan. 31, 2007) (satellite technology is present in at least 90% of Zip Codes).

discussed below, several technologies are emerging. Consumers can credibly threaten to switch providers.

Numerous other providers seek to meet this broadband demand, including fixed and mobile terrestrial wireless providers and power companies. Continuing technological and market changes are reducing barriers to entry, in part by lowering the amount of unrecoverable investment — or “sunk costs” — needed to enter the market and in part by creating opportunities for new entrants to win market share by offering differentiated products over alternative platforms. Wireless technologies such as Wi-Fi and WiMAX, for example, do not require entrants to incur the significant fixed costs associated with deploying wireline infrastructures, while broadband over power lines (“BPL”) avoids these costs by relying on the existing electricity distribution network. Moreover, mobile wireless broadband providers can “piggy back” on an existing infrastructure of cellular towers, and have the added advantage of an existing customer base.

As so often happens in a vigorous marketplace, this competition has lowered prices and increased both the quality of service and innovation. The price of broadband has plummeted over the past three years.²⁵ Cable modem and DSL providers continually improve the quality of their services. In the past three years, the downstream speeds of major cable operators’ fastest offerings have increased from 2-4 Mbps to 4-15 Mbps, while the major DSL operators have

²⁵ See John B. Horrigan, *Home Broadband Adoption 2006*, PEW INTERNET & AM. LIFE PROJECT, May 26, 2006, at 6; C. Moffett, *Broadband Update: “Value Share” and “Subscriber Share” Have Diverged*, BERNSTEIN RESEARCH, Apr. 21, 2006, at Exhibit 1 (in the case of DSL services, average prices have fallen by nearly 30 percent over the last three years).

increased their top downstream speeds from less than 1 Mbps to 2-3 Mbps.²⁶ In 2006, cable operators invested over \$9 billion dollars in their infrastructures to provide digital video and broadband services.²⁷ Verizon and AT&T are spending billions of dollars to install fiber-to-the-premises and fiber-to-the node networks. Other providers, including Intel, Clearwire, and Motorola, are investing billions to deploy new wireline and wireless broadband networks using technologies like WiMAX, Wi-Fi, BPL, and satellite. In high technology industries, like broadband, a high level of innovation and rapidly changing products are typical. Applying static regulations to rapidly evolving industries is problematic because it is more likely to retard the very innovation that makes the industry so dynamic.

The second problem is that we would not normally expect to see widespread consumer protection problems in a competitive dynamic as robust as this one, and advocates for a new regulatory regime have not succeeded in generating any appreciable evidence that such problems exist. Proponents of broadband regulation have not set forth a consistent rationale for the proposed regulation, instead advocating rules that address hypothetical problems.²⁸ Indeed, to paraphrase the title of a famous article by the late Phil Areeda, “net neutrality” has become an epithet devoid of any analytical content.²⁹ In fact, the only episode to which critics point is the apparent decision by a rural phone company, Madison River Communications, to block calls that

²⁶ See C. Moffett, et al., *The Dumb Pipe Paradox (Part II): Patchwork Pipes*, BERNSTEIN RESEARCH, Feb. 28, 2006, at 3. See also J. Hodulik, et. al., *Is the Broadband Duopoly under Threat?*, UBS, May 10, 2006, at 3; Press Release, Fed. Commc’ns Comm’n, Fed. Commc’ns Comm’n Releases Data on High-Speed Services for Internet Access (Jan. 31, 2007) (advanced services lines, connections that deliver speed in excess of 200 kbps, increased by 35% in 2006).

²⁷ See Nat’l Cable & Telecomm. Ass’n, *2006 Industry Overview*, 2006, at 5 & Chart 1 (citing Kagan Research data).

²⁸ See United States Internet Indus. Ass’n, *A Critical Analysis Of Proposed Legislation For Network Neutrality*, Aug. 30, 2006, <http://www.usiia.org/pubs/Analysisn.doc>.

²⁹ See Philip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L. J. 841 (1989) (essential facilities is “less a doctrine than an epithet”).

originated with the VoIP provider Vonage. The dispute between Madison River and Vonage arose when Vonage refused to pay Madison River's termination fee. Madison River responded to Vonage's intransigence in the negotiation by refusing to connect Vonage's calls to its customers. The FCC quickly intervened, ordered Madison River to connect Vonage's calls and imposed a \$15,000 fine on Madison River.³⁰ Meanwhile, I understand that even if VoIP providers have refused to pay telephone company charges for call completion, the telephone companies have continued to complete VoIP calls.

We do not, for example, see broadband providers closing their systems to unaffiliated content. The major network service providers have committed not to block their customers' access to legitimate, legal content and applications.³¹

Nor do we see any evidence of information security issues. Firewalls and virus filters are fundamental to network security. For example, businesses, such as law firms, use firewalls to fight against suspicious traffic. From a consumer protection standpoint, broadband regulation may jeopardize service providers' efforts to protect their customers' sensitive information.

³⁰ Madison River Communications, LLC and Affiliated Companies, Consent Decree, 200 FCC Rcd 4295, ¶¶ 4, 19 (E.B. 2005).

³¹ See *AT&T Promises to Better Cable Experience; CEO: More Features, More Functionality At Lower Price*, MULTICHANNEL NEWS, Apr. 10, 2006 (AT&T Chairman Ed Whitacre: "AT&T will not block anyone's access to the Internet, nor will we degrade anyone's quality of service, period. End of story."); Rhonda Ascierio, *US House Neuters Net Neutrality*, COMPUTERWIRE, June 12, 2006 (Cox Communications spokesperson David Edleman: "Cox does not and will not block or slow access to any legal site on the web. Quite simply, it is not in our interest to do so."); *Notebaert: Qwest Won't Block Content, but It Will Charge*, XCHANGE MAGAZINE, Mar. 16, 2006, <http://www.xchangemag.com/tdhotnews/63h1614143172779.html> (Qwest CEO Richard Notebaert: Qwest "will not block anything on the Internet."); Jim Barthold, *Verizon's Captain Charts Slow, Steady Course*, TELECOMMUNICATIONS ONLINE, Feb. 9, 2006, http://www.telecommagazine.com/archives/article.asp?HH_ID=AR_1713 (Verizon CEO Ivan Seidenberg: "We don't block anything; never have, never will. It's not part of what we do."); Mike Farrell, *No One Neutral About Net Free-for-All; Seidenberg: Costs of Building Backbone Must Be Shared*, MULTICHANNEL NEWS, Feb. 13, 2006 (National Cable & Telecommunications Association CEO Kyle McSlarrow: "So, let me be clear: NCTA's members have not, and will not, block the ability of their high-speed Internet service customers to access any lawful content, application or services available over the public Internet.").

Most consumers are able to evaluate the broad array of competitive broadband offerings and assess the attributes of the different technologies. In today's highly competitive market, absent strong evidence of existing consumer protection problems, mandatory disclosures for specific terms in Internet access agreements appear unnecessary. Mandatory disclosure regimes in other industries have yielded complicated disclosures written in language designed more to avoid litigation and regulatory scrutiny than protect consumers.³² In the current broadband Internet access market, consumers appear to be focused on price and speed when purchasing service, and the industry has responded accordingly. But other attributes may become more important over time, and even now, third-party analysts and market observers, such as Consumer Reports, compare different types of broadband access across a wide range of variables, including price, speed, always-on connectivity, and the ability to share Internet service with other computers.³³ The ability of consumers to shift expenditures based on these attributes imposes a rigorous discipline on each provider to satisfy consumer preferences.

IV. PROPOSED REGULATION WOULD HARM INNOVATION AND HINDER INVESTMENT IN BROADBAND INFRASTRUCTURE

Over the last four decades as the Federal government has slowly deregulated the Internet, consumers have clearly benefited. The recent explosion of Internet content and applications would have been impossible without the investments by Internet access providers in their

³² For example, the subject matter of Gramm-Leach-Bliley Act ("GLBA") disclosures is complicated and the language is difficult to understand. The Truth in Lending Act ("TILA") provides another good example. While one of the intended purposes of the TILA was to help consumers understand the cost of credit, credit card disclosures under the Act are written in legalistic language often confusing to consumers.

³³ See *Internet Service: Fiber joins the fray*, CONSUMER REPORTS, Feb. 2007; *Online Survival Guide: Internet Service*, CONSUMER REPORTS, Sept. 2005.

broadband infrastructure.³⁴ Without extensive regulation, network providers have had the freedom to use and manage their networks to recoup their investments, and in turn, invest further in their broadband infrastructure. In addition, as mentioned previously, the growing demand for broadband access to new and data-intensive web content has encouraged the entry of new wireline and wireless broadband providers using WiMAX, Wi-Fi, BPL, satellite, and other technologies.

The push for a new regulatory regime for the Internet is ill-defined and should be resisted. As in any multi-sided industry that involves the connection of different groups of customers, complex issues may arise. But existing competition and consumer protection law and policy can resolve these cases without diminishing the incentive that firms have to invest in their networks.

A. Broadband Has Become a Two-Sided Market

Broadband is a classic example of what economists call a two-sided industry. To exist, a two-sided product must appeal to two distinct sets of customers, and the value of the system to one group of customers is largely a function of its attractiveness to the other group. In the broadband industry, providers must create a platform that is attractive to both consumers of Internet access and Internet content providers.

A common example of a two-sided industry is newspapers. Newspapers connect readers and advertisers. Without readers, a newspaper would not attract advertisers, and increasing the

³⁴ “As the FCC has relaxed or eliminated regulations, broadband investment and download speeds have surged – we now enjoy almost 50 million broadband links, averaging some three megabits per second. ...But that ‘explosion of innovation’ at the ‘applications and content layer’ was not feasible without tens of billions of dollars of optics, chips and disks deployed around the world.” Bret Swanson, *The Coming Exaflood*, WALL ST. J., Jan. 20, 2007, at A11.

price of a newspaper to compensate for the absence of revenue from advertisers would repel readers.³⁵ Similarly, the value of the Internet to content providers is largely a function of the Internet's attractiveness to consumers. As more consumers use broadband to access the Internet, the more willing content providers are to create cutting-edge web applications and content to reach these consumers. The same is true for consumers. As more information becomes available on the Internet, the more consumers seek to access that information through broadband.³⁶

In a two-sided industry, the side with attractive low-cost substitutes normally gets the better deal. This is not a matter of fairness or cost recovery. It is simply the way that the supplier of the two-sided product maximizes the appeal and use of the product to both groups of customers. Broadband providers must design and price the platform to create a critical mass of both groups of customers. In two-sided markets, firms will charge a lower price to the group with greater network effects.³⁷ To continue the previous example, "the network effects of increased readership on the value of advertising are generally much greater than the effects of increased advertising on the value of the paper to readers."³⁸ Readers have many sources for news, including radio, television, and the Internet, which makes them likely to respond to changes in subscription prices. Consumers have attractive substitutes for broadband access,

³⁵ See Timothy J. Muris, *Payment Card Regulation and the (Mis)application of the Economics of Two-Sided Markets*, 2005 COLUM. BUS. L. REV. 515, 517 (2005).

³⁶ See Timothy J. Muris, *Payment Card Regulation and the (Mis)application of the Economics of Two-Sided Markets*, 2005 COLUM. BUS. L. REV. at 517-518.

³⁷ See *id.* at 519. A network effect is a characteristic that causes a good or service to become more valuable to a potential customer as the number of other customers who use the good or service increases.

³⁸ *Id.* at 519.

including telecommunication providers, cable companies, and satellite companies.³⁹ Additional substitutes are emerging, including broadband service from power utilities, wireless providers, and municipalities. If any Internet access provider increases the price of broadband to consumers, many will turn elsewhere for broadband Internet access. It is critical for regulators to resist the temptation to prevent this process from working optimally.

B. Intervention Would Hurt Consumers

As is often the case in two-sided industries, consumers and content providers have conflicting interests.⁴⁰ As much as possible, content providers would like *consumers* to pay the full cost of building out last mile access through higher service fees. Consumers, on the other hand, want the Internet to shift toward the model more traditionally associated with advertising sponsored media such as the radio, television, and newspaper industries.⁴¹ That is, consumers would like content providers to invest some of their rapidly increasing advertising revenue for the infrastructure to allow consumers to receive next generation service over the same pipes and through the same basic interfaces that they use to send e-mail.

Absent government intervention, the market will sort this out. Different firms will test different mixes of price, quality, and convenience. Some will favor consumers. Others will favor content providers. Firms that provide the mix of price, quality, and convenience to maximize participation by both sides of the industry will succeed, and those that do not will fail. At this point, it is very hard to know what the outcome will be. Consumers may prefer the value-

³⁹ See HSBC Global Research, *Net Neutrality: Telecoms Must Monetise the Net Rather Than Be Trapped in It -- We Set Out Our 'ABC' Path to Freedom*, 2006, at 17.

⁴⁰ See Muris, 2005 COLUM. BUS. L. REV. 515 at 517.

⁴¹ See *id.*

added features that particular networks are building to support content like streaming movies in HDTV resolution, real-time gaming, and enhanced protection of their personal information to the similar but (presumably) inferior offerings made available over the existing infrastructure.⁴²

Business models in two-sided industries can shift very quickly.

Network providers not only need to offer and manage the existing demand for broadband services, but they also must attract capital to build out their networks.⁴³ Large network investments must continue to meet consumer demand for the broadband applications that will likely emerge over the next few years. For example, YouTube generates approximately 75 petabytes of data every three months.⁴⁴ As other companies seek to mimic YouTube's success, the amount of high-definition video traffic on the Internet is likely to expand tremendously. Consumer demand for high speed bandwidth will extend beyond the entertainment industry. Advances in digital medical imaging will soon allow doctors and patients to share multigigabyte medical files on the Internet.⁴⁵ These real-time medical consultations, a form of telemedicine, will not succeed on a best-efforts network.⁴⁶ Broadband providers need the freedom to establish the network architecture to make possible the delivery of entertainment and build the infrastructure to support new applications. This is a difficult task when the magnitude, heterogeneity, and variability of demand that will be placed on the network are uncertain.

⁴² If the current offerings are not "inferior," the new content will not succeed.

⁴³ See United States Internet Indus. Ass'n, *A Critical Analysis Of Proposed Legislation For Network Neutrality* at 8, Aug. 30, 2006, <http://www.usiia.org/pubs/Analysisnn.doc>.

⁴⁴ See Bret Swanson, *The Coming Exaflood*, WALL ST. J., Jan. 20, 2007, at A11.

⁴⁵ See *id.*

⁴⁶ See *A Critical Analysis Of Proposed Legislation For Network Neutrality* at 8.

V. CONCLUSION

In this highly competitive industry, consumers will select the broadband technology that most appeals to them. Each of the existing and expected broadband services has different attributes, and even particular technologies — *e.g.*, cable modem or DSL — can be configured in different ways. When picking broadband access service, consumers not only have a choice of broadband providers, but also a range of options including different speeds, connectivity options, mobility, and price.

In a highly competitive market, absent any demonstrable consumer harm, there is no need for regulators to intervene and unnecessarily risk disrupting the market dynamic. Problems at this juncture are almost pure speculation. Taking a cautious and measured approach to regulating a high technology market is particularly important. The FTC should continue to monitor consumer protection issues if any emerge, but attempts to adopt more specific guidelines or regulation risk interfering with legitimate innovations.