VOIP AND PAY-TO-PLAY:  
BROADBAND’S ATTEMPT TO PUSH  
AWAY DIRECT COMPETITION

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INTRODUCTION

In late 2005 and early 2006, top executives of broadband providers indicated that they plan to charge a fee to Internet application companies like Google, Yahoo!, and Vonage, for access to consumers’ homes through new “managed and secure” fiberoptic networks. Multiple broadband providers have expressed support for the plan to charge Internet application companies for assured fast and priority delivery over the Internet. 1 Broadband providers assure consumers that they will not block their networks from Internet application companies that do not pay the access fee. However, in an age where more and more applications—such as Voice over Internet Protocol (VoIP), music and video delivery, and online gaming—are time sensitive, the inability to pay such a fee and the subsequent penalty of slower delivery may effectively block an Internet application company from providing content.

Broadband providers argue that they made an investment in cable and DSL infrastructure and that Internet application companies are free riding on their “pipes.” 2 On the other hand, Internet application companies...
companies contend that the customer is already paying for the bandwidth and that broadband providers are using their power in the local high speed Internet access market to extort fees from application companies.\(^3\)

Framing the current debate is the principle of “network neutrality” (NN), which generally holds that Internet data packets should move nondiscriminatorily (that is, without restrictions or limitations imposed by a broadband provider). If a “pay-to-play” policy for high speed Internet is adopted, there is an enormous risk that end-to-end (e2e) innovation,\(^4\) one of the great benefits of the Internet, will be swallowed into a centralized system of protocols determining which Internet applications receive priority and, thus, enhanced exposure to users.

This Comment focuses on one Internet application that will be directly affected by the proposed broadband pricing policy: Voice over Internet Protocol. Although not a new concept, VoIP has begun to proliferate only during the last few years. Internet companies such as Vonage have used the technology to substantially reduce the cost of

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\(^3\) Vonage Chairman Jeffrey Citron compares the attitude of SBC to “UPS demanding [that] the sender and the recipient of a package both pay for delivery.” Mohammed, supra note 2, at D1 (paraphrasing Citron’s comments). He argues that it is “ludicrous” for any broadband provider to “get paid twice on the same service.” Id. (quoting Citron); see also Searcey & Schatz, supra note 1, at A1 (reporting that Vonage’s Citron believes that the system will ultimately cause the consumer to pay twice for broadband access). Additionally, Paul Misener, Amazon.com’s Vice President for Global Public Policy, argues that, since most consumers have limited choices for broadband Internet access, broadband providers have “if not monopoly, then duopoly” power. Mohammed, supra note 2 (quoting Misener).

\(^4\) The e2e principle is a theory of innovation that “rejects centralized, planned innovation, and holds that the greatest rate of technological development is driven by delegating decisional authority to the decentralized ‘ends’ of any network.” Tim Wu, The Broadband Debate, A User’s Guide, 3 J. ON TELECOMM. & HIGH TECH. L. 69, 74 (2004). The principle results from the fact that “the ‘ends’ of the network are numerous, or nearly unlimited, and delegating authority to the ends opens the door to more approaches to a given technological challenge.” Id.
Many broadband providers have recently started to offer VoIP services themselves, including Verizon’s VoiceWing, AT&T’s CallVantage, and Comcast’s Digital Voice. However, as a result of broadband providers’ control over the last mile of the network, every VoIP competitor will have to pay a surcharge in order to ensure timely delivery of the information packets necessary for VoIP to function. As early as March 2004, market analysts predicted that Vonage would be driven from the market by this anticompetitive pay-to-play system:

It may seem like a dodgy competitive tactic, but broadband network operators could slow down Vonage’s service. As subscribers increase their use of latency sensitive and graphic-rich IP traffic, broadband providers could give network precedence to their own revenue-generating services. Unless Vonage pays fees to the network provider, there is no reason the operator should not make the service a lower priority on the network.

Thus, broadband providers’ VoIP services will always maintain a significant competitive advantage over non-broadband VoIP services, not because of the merits of their services, but because of the additional fee they can require competitors to pay.

This Comment argues that the pay-to-play tactics proposed by broadband providers have significant anticompetitive effects that may violate United States antitrust laws under the Sherman Act. Some commentators suggest that the Federal Communications Commission (FCC) or the Federal Trade Commission (FTC) should regulate the Internet using an “antitrust-like” approach, in order to avoid competitive harms before they occur. Although this approach has strong merit and could seamlessly incorporate the principles articulated in this Comment, the current regulatory policy remains hands-off. Thus, in the time period between the present deregulation of the broadband market and the competitive ideal of the future, there is a need for an interim solution to protect innovation. I argue that a court-

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5 Traditional telephone services charge customers primarily based on the duration of the call and on the distance between the call participants. *The Meaning of Free Speech, The Economist*, Sept. 17, 2005, at 69, 70. However, these factors “are simply irrelevant with VoIP.” Id.


enforced, case-by-case antitrust framework would provide that solution, and that it is thus important today to articulate such liability.

Part I of this Comment explains how time-sensitive applications such as VoIP work and what makes them vulnerable to a pay-to-play priority distribution system. Part II describes the potential effects that a pay-to-play system would have on innovation in the application markets. Part III discusses three potential government responses to the pay-to-play system. Finally, Part IV examines the antitrust doctrines that a pay-to-play system might violate.

I. HOW TIME-SENSITIVE APPLICATIONS WORK: WHAT IS VOIP?

As the name VoIP expresses, the technology “transmits voice over the Internet in the form of Internet protocol.” VoIP converts a user’s voice into digital bits and organizes them into thousands of “packets.” Each voice packet is “individually addressed [to the intended recipient] and sent over [the] physical networks” of broadband providers. However, unlike traditional public, switched telephone networks, in which a voice transmission takes a “‘permanent or exclusive’ path from its sender to its recipient,” Internet routers “read packet addresses individually and decide the optimal path of transmission for each packet.” Thus, despite the perceived “constancy” of a fixed connection between the conversing individuals, a VoIP transmission allows the voice packets to take a variety of routes to the same final destination. Upon arrival of the individual voice packets, the participant’s computer aggregates and reassembles them into a coherent conversation. Through this method of transmission, “VoIP can carry significantly more informa-

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9 Id. (“[VoIP’s] transmission is essentially no different from other forms of information transmitted over the internet . . . .”).
10 Id.
11 Id. The physical networks “may be composed of copper, fiber, coaxial cable, or wireless facilities.” Id.
12 Id. at 841. If a portion of a network is malfunctioning, routers are able to recognize the disturbance and “seek an alternate path for the packets to travel.” Id.
13 Id. at 840-41.
14 Id. at 841.
tion in a more efficient manner than analog transmission” over fixed telephone lines.\textsuperscript{15}

What differentiates VoIP from traditional Internet applications, such as e-mail and instant messaging, is the time-sensitive nature of packet delivery. When sending and receiving an e-mail, a one-second delay of a digital packet is usually undetectable by the user. However, when using the Internet to transmit voice or video, even a tenth-of-a-second delay could destroy the usefulness of the application.\textsuperscript{16} Thus, with the increased use of the Internet for voice communication, video and music downloading, and gaming, there is considerable consumer demand for reliable and speedy packet delivery.\textsuperscript{17} To meet this increased demand, broadband providers are upgrading their networks.\textsuperscript{18}

\section*{II. PAY-TO-PLAY: EFFECTS ON INNOVATION}

To date, broadband providers have generated income streams directly from consumers. Many providers price discriminate between residential and commercial users of their networks.\textsuperscript{19} In addition, in order to ensure network quality and speed, providers often limit consumer bandwidth\textsuperscript{20} or base their charges on bandwidth usage.\textsuperscript{21} Al-

\begin{itemize}
\item \textsuperscript{15} \textit{Id.}
\item \textsuperscript{16} See Tim Wu, \textit{Network Neutrality, Broadband Discrimination}, 2 J. ON TELECOMM. & HIGH TECH. L. 141, 148 (2003) (stating that a delay of a few milliseconds “certainly matters for applications that want to carry voice or video”). Although invented in the early 1990s, VoIP was not a viable technology during the “narrow band” dial-up era of the Internet. In 2004, many engineers still incorrectly believed that the technology could not be supported on the present broadband networks. See Wu, \textit{supra} note 4, at 71-72 (discussing the various reasons for the delay of widespread consumer use of VoIP).
\item \textsuperscript{17} See Christopher S. Yoo, \textit{Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-To-End Debate}, 3 J. ON TELECOMM. & HIGH TECH. L. 23, 35 (2004) (noting that “[b]andwidth-hungry applications . . . are placing increasing pressure on network capacity”).
\item \textsuperscript{18} In addition to upgrading their networks to meet the growing demand for time-sensitive applications, many broadband providers are considering the use of “policy-based routers,” which can discriminate among packets and assign them different levels of priority, depending on the source of the packet or the nature of the application being run.” \textit{Id.} at 36. For a discussion of the policy issues behind “policy-based routers,” see \textit{infra} Part II.B.1.
\item \textsuperscript{19} See Searcey & Schatz, \textit{supra} note 1 (“Cable and phone companies have already started offering multitiered pricing of broadband for consumers.”).
\item \textsuperscript{20} See Wu, \textit{supra} note 16, at 15862 (outlining broadband usage restrictions); Searcey & Schatz, \textit{supra} note 1 (describing some cable companies’ intentions to prevent “broadband customers from using too much bandwidth”).
\end{itemize}
though commentators disagree about whether consumer pricing based on bandwidth usage protects the open nature of the Internet and permits innovation on the “ends” of the network, differing pricing levels—residential as opposed to commercial—based on bandwidth usage has been the industry norm. However, recent pay-to-play musings by broadband providers violate many of the principles of NN and present serious risks, including stifling innovation.

A. Network Neutrality Promotes Innovation

Generally, the principle underlying NN focuses on the importance of protecting the ability of Internet users to access Web content and to use Internet applications without limitation or restriction by broadband providers. Academic promoters of the NN principle, like Tim Wu, seek to “preserv[e] a Darwinian competition among every conceivable use of the Internet so that . . . only the best survive.” Although commentators disagree on the best method of preserving NN—most notably on the “dumb” versus “smart” pipe debate—most, if not all, agree that preserving Internet innovation as the basis of “economic growth” is a principal goal. Both sides of the debate view

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21 See Yoo, supra note 17, at 36 (“[M]any last-mile providers either forbid end users to use bandwidth-intensive applications . . . or instead require that they pay higher charges before doing so.”).

22 Compare id. at 27-28 (suggesting that broadband providers could “differentiate” their networks to “serv[e] the needs” of different subgroups, with “one optimizing its network for conventional Internet applications such as e-mail and website access, another incorporating security features to facilitate e-commerce, [and] a third employing routers that prioritize packets in the manner needed to facilitate time-sensitive applications”), with Wu, supra note 16, at 152-53 (arguing that, although “mainstream antitrust analysis has come to see [it] as generally uncontentious,” price discrimination may have unfortunate, “dynamic consequences for the competitive development of new applications”).

23 See Wu, supra note 16, at 160-61 (describing the limitations broadband providers place on “commercial use” of “residential broadband connections”).

24 Id. at 142.

25 “Openists,” those in favor of a “dumb pipe,” believe that innovation and “technological development” are driven by decentralizing authority and delegating it to the “ends” of the network. Wu, supra note 4, at 74. They see “fast and reliable connection[s]” as a service that “must not discriminate as between users, or content,” Id. at 72-73. “Deregulationists,” those in favor of a “smart pipe,” have a contrasting view of “media convergence” onto a single “smart pipe” that has the ability to distinguish between those applications that are time sensitive and those that are not. Id. at 75-76. They believe that the enormous incentives to provide bundled media and communications will drive innovation and growth. Id. at 76-77.

26 See id. at 80 (discussing the “Shared Economic Faiths” of the two principal NN approaches).
innovation, including “new companies, new services, and new products,” and “not price competition,” as the “principle driver of economic growth” and increased efficiency. 27

In order to protect such innovation, proposed NN rules create rights for Internet users. For example, a recently proposed rule reads:

(b) General Right of Unrestricted Network Usage. Broadband Users have the right to use their Internet connection in ways which [are] not unlawful or harmful to the network. Accordingly neither Broadband Operators nor the Federal Communications Commission shall impose restrictions on the use of an Internet connection except as necessary to: [prevent uses illegal under statute or uses harmful to the network]. 28

In August 2005, the FCC adopted four NN principles 29 based on the fundamental proposition “that consumers should be able to use their broadband internet access service to access any content on the internet.” 30

These proposed and adopted NN rules and principles are attempts to form a “pre-commitment rule for both government and industry . . . prevent[ing] now what may be temptations tomorrow.” 31 From the industry’s point of view, NN rules and principles offer significant value to broadband providers by preventing the government “from blocking [broadband provider] entry into the application mar-

27 Id.
28 Id. at 88 (citing the latest iteration of a proposed rule that was initially submitted to the FCC in Letter from Tim Wu, Associate Professor, Univ. of Va. Sch. of Law & Lawrence Lessig, Professor of Law, Stanford Law Sch., to Marleen H. Dorth, Sec’y, FCC (Aug. 22, 2003) [hereinafter Letter from Wu & Lessig], available at http://www.freepress.net/docs/wu_lessig_fcc.pdf.
29 For a list of these four principles, see infra note 70 and accompanying text. Prior to the official adoption of these principles, former FCC Chairman Michael Powell had articulated and published his own view of the four freedoms to which all Internet users are entitled. Michael K. Powell, Preserving Internet Freedom: Guiding Principles for the Industry, 3 J. ON TELECOMM. & HIGH TECH. L. 5, 11-12 (2004) (enumerating the four “Internet Freedoms”: (1) “freedom to access content,” (2) “freedom to use applications,” (3) “freedom to attach personal devices,” and (4) “freedom to obtain service plan information”).
31 Wu, supra note 4, at 89 (emphasis added).
and thus protecting broadband providers’ ability to offer "competitive, vertically integrated applications themselves." From the government’s point of view, the NN rules and principles protect market entry by "creating a structural bias that favors entry of any player . . . into the market for consumer usage of the Internet."

Fundamentally, the NN rules and principles “are designed to make the Vonage story repeat itself.” Vonage is an archetype of a new company driving innovation. In the 1990s, VoIP was often discussed within the broadband community and the media, though it was seldom deployed. When broadband providers were asked when VoIP would be available to the general consuming public, “the answer was always ‘not quite yet.’” Those questioning the viability of VoIP argued that, “without substantial network improvements,” the consuming American public would refuse to purchase such an “inconsistent” technology. Both DSL and cable providers were reluctant to take significant steps toward a VoIP rollout. DSL providers, the most prominent of which were Bell companies, feared “cannibalizing the industry’s most profitable [phone] service,” and cable broadband providers likely feared sparking a DSL entry into “residential video.”

In 2003, however, instead of cooperating with the reluctant broadband providers, Vonage sold VoIP service straight to consumers. By selling a phone that plugged into the network, Vonage avoided broadband providers altogether and charged “a fraction of” the traditional telephone network cost. During a time of uncertainty

32 Id. “If the users have the right to access lawful applications and content, that includes those provided by the operator itself.” Id.
33 Id.
34 Id. (emphasis added).
35 Id.
36 Id. at 71.
37 Id.
38 Id. at 71-72.
39 See CHARLES H. FERGUSON, BROOKINGS INST., POLICY BRIEF #105: THE U.S. BROADBAND PROBLEM 1, 5 (2002) (arguing that “[t]he slow pace of improvement in broadband services is not surprising,” since “[n]either industry would logically be interested in provoking highly dynamic competition in open-architecture, high-speed, and/or symmetric broadband services to either businesses or homes”).
40 Wu, supra note 4, at 72.
41 FERGUSON, supra note 39, at 5.
43 Wu, supra note 4, at 72.
about the future of VoIP, Vonage “off ered what everyone said no one would buy.” Without a company like Vonage to drive innovation, “VoIP would have arrived on the carrier’s schedule: later or perhaps never.”

The “structural bias” of the Internet, which currently favors market entry, made the Vonage story possible. Even if Vonage is eventually pushed out of the market as a result of competition—as many predict it will be—it will have succeeded in moving the entire network forward by bringing innovation to market.

B. Pay-To-Play Destroys Network Neutrality

A pay-to-play policy contravenes both the NN rules and the FCC principles and would act as a preclusive barrier to new and innovative Internet application companies.

1. The Shift from Nondiscriminatory Protocols
to Discriminatory “Smart Pipes”

First, in order to make a pay-to-play policy policeable, broadband providers must continue their departure from the nondiscriminatory and largely anonymous TCP/IP framework to “smart pipes” with the ability to identify and discriminate among packets based on their sources. “Openists,” who believe that broadband networks “should be kept ‘dumb’ and should focus solely on passing along packets as quickly as possible,” are reluctant to accept such a departure from TCP/IP.

Pragmatists like Adam Thierer recognize the potential competitive dangers of discriminatory broadband networks, but also identify sev-

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44 Id.
45 Id.
46 Wu, supra note 4, at 89. As the CEOs of Google, Microsoft, Intel, and several other major technology companies put it, “innovation without permission’ represents ‘the essence of the Internet.” ROBERT D. ATKINSON & PHILIP J. WEISER, INFO. TECH. & INNOVATION FOUND., A “THIRD WAY” ON NETWORK NEUTRALITY 5 (2006), http://itif.org/files/netneutrality.pdf.
47 See infra note 63 and accompanying text (noting that it is unlikely that independent providers will continue to dominate the VoIP market).
48 Wu, supra note 4, at 89.
49 TCP/IP “routes all packets in a nondiscriminatory (i.e., first come, first served) manner without regard to the packet’s content, point of origin, or associated application.” Yoo, supra note 17, at 33.
50 Id. at 41.
eral “smart pipe” benefits that could ultimately improve the quality and efficiency of networks. Those benefits include quality-service assurances, network integrity, increased security, and the ability to meet the demands of law enforcement.

The introduction of technology capable of discrimination must be undertaken with care. Along with the ability to “discriminate among packets” comes the power to “assign them different levels of priority, depending on the source of the packet or the nature of the application being run.” Internet application companies fear that misuse of this power would stifle rival competition and innovative applications. Actions taken under the guise of preserving “quality service” may actually be anticompetitive tactics to slow down rival applications. Additionally, since a broadband provider’s network control would be proprietary, “degrading service by introducing delays or dropping occasional calls [would be] difficult to prove.” Therefore, largely


52 Seeking “to ensure steady traffic flows” by either “curb[ing] excessive bandwidth usage by some users, or at least price discriminat[ing] to encourage bandwidth conservation” would benefit the entire network. See id. at 296 (describing these approaches).

53 Many Internet “end users have become increasingly frustrated by intrusions thrust upon them by other end users.” Yoo, supra note 17, at 36-37. Forms of intrusion, “such as viruses, worms, Trojan horses . . . and programs that mine cookies for private information,” threaten network integrity. Id. at 37 (detailing various “malicious” intrusions on Internet usage and the reactions of consumers). Subscribers expect and demand that their broadband provider take protective measures “to prevent viruses or block excessive Spam.” Thierer, supra note 51, at 296.

54 Under the Communications Assistance for Law Enforcement Act (CALEA), law enforcement agencies must have the ability to place wiretaps on Internet phone calls. See Yoo, supra note 17, at 37 (“CALEA . . . requires that all telecommunications carriers configure their networks in a way that permits law enforcement . . . to place wiretaps on telephone calls.”).

55 Id. at 36.

56 For example, in November 2004, Nuvio Corporation, a small VoIP provider based in Kansas City, filed a request with the FCC to “prohibit[] providers of broadband connections . . . from degrading third-party offerings in an attempt to gain a competitive advantage.” Alan Breznick, VoIP Provider Presses FCC To Block Broadband Discrimination, CABLE DIGITAL NEWS, Nov. 1, 2004 (on file with author); see also Donny Jackson, Nuvio Seeks Non-discriminatory Broadband for VoIP, TELEPHONY ONLINE, Sept. 24, 2004, http://telephonyonline.com/broadband/web/telecom_nuvio_seeks_nondiscriminatory.

undetectable discriminatory protocols give broadband providers the power to interrupt rivals’ time-sensitive applications.

Thus, although the increased intelligence of networks and “semi-smart pipes” may increase network efficiency and safety, the shift away from an anonymous and nondiscriminatory network may also create significant competitive dangers. Specifically, in an anticompetitive environment in which broadband providers control the reliability and consistency of a rival’s application, there will be disincentives for new companies to create innovative applications.

2. The Inability of Innovators To Pay

Pay-to-play policies have an additional, even more obvious, risk to potential Internet innovators: new start-up companies with innovative applications might not be able to afford the premium for assured packet delivery. Although broadband providers claim they will not become “Internet gatekeepers” because they will not technically block consumer access to applications, a pay-to-play policy would effectively block any Internet company whose application requires time-sensitive packet delivery. Particularly since Internet application companies already must pay broadband providers large fees for bandwidth, payment of an additional fee “would be very damaging” for many start-up companies. In addition, venture capitalists would find “fewer new businesses worthy of investment if the phone and cable companies are allowed to favor one business over another.”

A pay-to-play system would create significant barriers to entry for future time-sensitive applications, thus foreclosing many innovative

58 See Mohammed, supra note 2 (quoting SBC spokesman Michael Balmoris as saying that “SBC has not and will not block or limit access to lawful content or applications on the Internet”).

59 Thus, current video, voice, or music applications would be affected by the pay-to-play policy. Additionally, there would be a chilling effect on the incentive to research and develop innovations like Internet computing—running all PC functions on a central processor over the Internet—if packets could not be guaranteed timely delivery without payment.

60 Internet Debate: Preserving User Parity (Nat’l Pub. Radio Broadcast Apr. 25, 2006) (comments of Josh Felser, CEO of Grouper.com); see also Atkinson & Weiser, supra note 46, at 5 (recognizing that “an Internet where an innovator has to ask permission (and pay potentially significant fees) before deploying a new technology threatens the Internet’s golden goose of allowing innovation over an open platform”).

61 Internet Debate, supra note 60 (citing the concerns of Gary Morganthaler, general partner in the venture capital firm Morganthaler Ventures).
Internet application companies from competing with broadband providers on the merits of their services.

3. The Result: Disincentive To Innovate

The combination of a discriminatory protocol and a barrier to entry for time-sensitive applications would create a potentially dangerous result: innovators on the “ends” of the network might choose not to develop new applications.

A pay-to-play system would create an enormous disincentive to a rational innovator or venture capitalist who is deciding whether to develop or fund a new Internet application. Lawrence Lessig and Tim Wu suggest that even comments by broadband providers’ top executives about the possibility of implementing a pay-to-play system can have a detrimental effect on innovation: “If the innovation is likely to excite an incentive to discrimination, and such discrimination could occur, then the mere potential imposes a burden on innovation today whether or not there is discrimination now. The possibility of discrimination in the future dampens the incentives to invest today.”

Many of the participants in the present pay-to-play debate focus too narrowly on protecting independent VoIP providers from bankruptcy. However, it is likely that Vonage and other independent VoIP companies will not survive competition with the large broadband providers.

The crucial element to protect in this debate is Vonage’s role as an innovation catalyst, a company that succeeded in moving the entire network forward. Vonage’s role in promoting innovation must be replicable by others in the future. However, a pay-to-play policy for assured delivery of time-sensitive packets would inhibit the potential for innovation provided by a more neutral network model. Thus, future innovations would be stifled long before they could reach the market.

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62 Letter from Wu & Lessig, supra note 28, at 8-9 (emphasis added).
63 Although independent VoIP companies have created a significant consumer base due to their first-mover advantage, “it is unlikely that they will retain their dominant market share because the traditional telecom industry leaders and ISPs have more resources and brand power.” Sunny Lu, Celco Partnership v. FCC & Vonage Holdings Corp. v. Minnesota Public Utilities Comm’n: VoIP’s Shifting Legal and Political Landscape, 20 BERKELEY TECH. L.J. 859, 867 (2005). In addition, cable broadband providers will be able to offer the “‘triple play’ of broadband Internet connection, cable (television) and now VoIP,” providing the consumer with the convenience of having “one provider and paying one bill.” R. Alex DuFour, Voice over Internet Protocol: Ending Uncertainty and Promoting Innovation Through a Regulatory Framework, 13 COMMLAW CONSPECTUS 471, 476 (2005).
III. POTENTIAL RESPONSES TO THE PAY-TO-PLAY PROBLEM

Part II examined the dangers that a pay-to-play system poses to Internet innovation. This Part focuses on the potential responses from government and individuals.

A. Regulation: Broadband as an “Information Service”

Traditionally, telecommunications have been heavily regulated by the FCC. But in an attempt to increase competition in the provision of broadband services, the FCC has taken a “lighter regulatory touch.” Thus, it is likely that the FCC will not react to remedy the potential harms of a pay-to-play system.

In March 2002, the FCC concluded that cable broadband service is an “information service,” and not a “telecommunications service,” and thus is exempt from mandatory common-carrier regulation under Title II of the Communications Act of 1934. In August 2005, the FCC reclassified the provision of DSL broadband as an “information service” as well.

On the same day as the DSL reclassification, the FCC adopted four principles in order “[t]o encourage broadband deployment and

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64 See Dinkes, supra note 8, at 844-57 (providing a brief history of regulation of traditional public switched telephone networks).
67 See 47 U.S.C. § 153(20), (46) (2000) (defining “information service” and “telecommunications service,” the latter of which is subject to mandatory Title II regulation).
preserve and promote the open and interconnected nature of the public Internet\(^6\):

1. consumers are entitled to access the lawful Internet content of their choice . . .
2. consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement . . .
3. consumers are entitled to connect their choice of legal devices that do not harm the network . . .
4. consumers are entitled to competition among network providers, application and service providers, and content providers.

However, FCC Chairman Kevin J. Martin made it clear that the policy statements “do not establish rules nor are they enforceable documents.”\(^7\) In statements to the press, Martin has been noncommittal toward enforcing the “four principles” against broadband providers who implement a pay-to-play policy.\(^8\)

The primary purpose of relieving both cable and DSL providers from the mandatory Title II regulation is to increase competition between the two platforms on a level playing field.\(^9\) In addition, the FCC hopes to spur investment in other competing broadband technologies.\(^10\) If a pay-to-play policy helps to encourage market entry by


\(^7\) Id.

\(^8\) Id.

\(^9\) Press Release, supra note 30. On June 8, 2006, the United States House of Representatives passed the Communications Opportunity, Promotion and Enhancement (COPE) Act of 2006, H.R. 5252, 109th Cong. § 201 (2006), which has yet to be approved by the Senate. The COPE Act would amend Title VII of the Communications Act of 1934 and give the FCC the authority to “adjudicate any complaint alleging a violation of the broadband policy statement and the principles incorporated therein . . . .” Id. However, outside of the adjudication of complaints, the FCC would not have authority to “adopt or implement rules or regulations regarding enforcement of the broadband policy statement and principles incorporated therein . . . .” Id.

\(^10\) See Kevin Martin, Chairman, FCC, Answers to Reporters’ Questions at the American Enterprise Institute (Feb. 8, 2006), available at http://www.techlawjournal.com/agencies/fcc/networkneutrality/20060208.asp (“[T]he Commission . . . has adopted some network neutrality rules that address . . . some of the issues . . . . [T]he issues of whether or not the carriers can charge any of the content providers . . . has come up recently . . . . [T]he Commission is still trying to evaluate what that is . . . . I think that the marketplace is still evolving . . . .”).

\(^11\) See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. at 14,987 (describing the “principle” that “consumers are entitled to competition among network providers”).
increasing the possible rewards of competing in the broadband provider market, it is reasonable to assume that the FCC will likely decide not to intervene.\footnote{75}

Alternatively, Raymond Gifford, President and Senior Fellow of the Progress and Freedom Foundation, has suggested that the FTC should “supervise broadband services.”\footnote{76} Gifford argues that, under “the state of the law right now,” the FTC has the power and is in a strong position to protect the nation’s broadband market and its consumers.\footnote{77}

Gifford focuses on three factors that allow the FTC to balance the need for heightened “vigilance” in the broadband market against the need for “pricing freedom to recover fixed costs” in order to “encourage investment” in the broadband market.\footnote{78} First, he emphasizes that the FTC is “dedicated to competition policy and consumer welfare.”\footnote{79} Thus, any FTC “intervention” would have to be based on “claims of real harm, not competitive disadvantage.”\footnote{80} Second, Gifford reasons that, “as an agency of general jurisdiction, the FTC is less prone to” a specific industry’s influence.\footnote{81} Since the FTC has regulatory authority across the entire U.S. economy, cable and DSL providers would find it more difficult to “‘capture’ the FTC’s regulatory agenda.”\footnote{82} Third, he argues that the FTC would also be the appropriate broadband regulator because it is “largely an enforcement agency.”\footnote{83} It carries

\footnote{75} See Drew Clark, \textit{FCC Chief Opens Door to Tiered, High Speed Internet}, TECH. DAILY, Jan. 6, 2006, http://www.njtelecomupdate.com/lenya/telco/live/tbsFBRB1136842420157.html (quoting FCC Chairman Kevin Martin’s prediction that the FCC will continue to try to “move from ‘legacy regulations,’” of monopolies to a market that emphasizes competition).


\footnote{77} Id. The change in a broadband provider’s classification—from a common carrier to an information service—has significant effects on the FTC’s jurisdiction over broadband providers. After the reclassification of broadband, “the statutory exclusion of common carriers from FTC jurisdiction is not applicable.” \textit{Id}. The FTC currently “has jurisdiction within its competition policy and consumer protection mandates.” \textit{Id}.

\footnote{78} Id.

\footnote{79} Id.

\footnote{80} Id. Gifford claims that the FTC will be “deferential to markets absent clear harm to consumer welfare.” \textit{Id}.

\footnote{81} Id.

\footnote{82} Id.

\footnote{83} Id.
out its mission by investigating and bringing actions for “specifically alleged and proven harms to consumer welfare.” This type of narrow “[a]fter-the-fact regulation” has considerable advantages over the potentially overbroad “before-the-fact rulemaking regulation” or legislation.

Currently, the FTC has formed an Internet Access Task Force in order to “develop . . . expertise in the area of Internet access.” Deborah Platt Majoras, current Chairman of the FTC, has committed to coordinating with the FCC and recognizes that “the FCC’s mandate goes beyond competition and consumer protection.” As described above, the FCC, in an effort to encourage broadband deployment, has reduced regulatory constraints on broadband providers. Thus, where the jurisdictions of the FCC and the FTC intersect, the FTC may likely defer to the “lighter-touch” policy employed by the FCC.

B. Legislation Adopting Neutrality Principles

In the absence of a committed FCC policy toward neutrality, some members of Congress have sought to impose such a policy through legislation. Since the spring of 2006, the NN debate has been publicized on a national scale, with both telecommunications and e-commerce companies spending millions to influence Congress.

Both houses of Congress have held hearings on NN and listened to the viewpoints of academics, scientists, engineers, businesspeople, and even an “Internet Evangelist.” In a hearing before the Senate Committee on Commerce, Science, and Transportation, Lawrence

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84 Id.
85 Id.
87 Id. at 19-20.
Lessig proposed that Congress “ratify” former FCC Chairman Powell’s four “Internet Freedoms,” with an additional restriction upon pay-to-play “access-tiering.” On June 28, 2006, though, the Senate Committee on Commerce, Science, and Transportation rejected an NN amendment that would have disallowed pay-to-play systems based on network content. Under the defeated legislation, for example, Comcast would not have been able to charge Google Video for assured delivery of its time-sensitive packets. On the other hand, the legislation would have given broadband providers the option to offer “consumer-tiered” services. Broadband providers would have been able to charge consumers based on either “bandwidth guarantees” or “service guarantees.” With the option to charge for different levels of broadband use, broadband providers would have retained their incentives to build better broadband services and increase their capacity, even if the proposed amendment had not been defeated.

Those opposing the NN legislation proposed by members of Congress and Lessig fear the “one size fits all” approach, emphasizing that in the absence of an actual danger, “prophylactic” legislation “may do more harm than good.” In a continuing period of growth in which even the most experienced businesses cannot accurately predict market outcomes, critics like Christopher Yoo argue that there is “little

91 See supra note 29.

92 See Hearing, supra note 90, at 55 (testimony of Lawrence Lessig, Professor of Law, Stanford Law School).

93 See Grant Gross, Senate Panel Rejects Net Neutrality in Tie Vote: Stevens: Supporters Should ‘Build Their Own Network’, COMPUTERWORLD, June 28, 2006, http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9001506 (describing the amendment as “a proposal that would have required broadband providers to give their competitors the same speeds and quality of service as they give to themselves or their partners”); Kim Hart & Sara Kehaulani Goo, ‘Net Neutrality’ Amendment Rejected; Senate Committee Approves Telecom Bill, but Republicans May Need More Votes, WASH. POST, June 29, 2006, at D5 (reporting that a “proposal to prevent Internet service providers from charging Web firms more for faster service to consumers” failed to obtain enough votes from the Senate Commerce, Science and Transportation Committee).

94 Hearing, supra note 90, at 58 (testimony of Lawrence Lessig, Professor of Law, Stanford Law School), available at http://www.lessig.org/blog/archives/Lessig_Testimony.2.pdf. A “bandwidth guarantee” is an assurance of a minimum level of speed, while a “service guarantee” is an assurance that a certain service (such as video, voice, or gaming) would work properly on the network. Id.


96 For example, industry giant AT&T failed to appreciate the potential of the Internet. See LAWRENCE LESSIG, THE FUTURE OF IDEAS 32-33 (2001) (describing AT&T’s initial reaction to the Internet).
reason” to believe that a government-imposed outcome “will do any better.”97 Thus, legislative or agency involvement “meant to forestall a perceived danger that has not yet materialized” has a potential for being overbroad.98 Even though Congress’s purpose may be to protect innovation, passing legislation that cannot adapt to changing market environments may have the effect of inhibiting innovation.

C. Antitrust as a Framework for an Enforcement Mechanism

Those opposing the Lessig-type legislation often prefer a “market power alternative” approach in which any intervention (1) is “narrowly targeted to specific instances of market power, in terms of both geographic scope and behavioral requirements of the remedy”; and (2) “incorporate[s] a rigorous competitive standard and evidentiary showing.”100 The “market power alternative” approach sounds remarkably similar to antitrust enforcement of anticompetitive monopolistic activity. By imposing penalties and restrictions on broadband providers’ specific anticompetitive conduct, a framework based on antitrust law would alleviate the need for congressional legislation prescribing specific requirements for competition.101 Thus, an antitrust framework serves as a pragmatic middle ground to protect Internet innovation.

The “overriding goal” of antitrust law “is to maintain public confidence in the market mechanism by deterring and punishing instances of economic oppression.”102 In addition, a more targeted goal of anti-
trust is the promotion of innovation. Monopolists, such as broadband providers, have “a reduced incentive to innovate,” and, if they do innovate, they “may be motivated to suppress or delay commercialization.” One treatise acknowledges that, in order “to protect its monopoly, a firm may even attempt to suppress or discourage others from marketing available innovation”—the danger identified by this Comment. The application of antitrust law in the context of Internet applications would help protect future innovations like VoIP.

The FCC’s focus on the deregulation of the provision of broadband is meant to spur competition between DSL, cable, and alternative providers in the deployment of broadband. Deregulation often expands the domain of antitrust. When the government moves

103 Id. at 13. Innovation includes “improving [a] product, producing it more efficiently, or perhaps replacing it with an entirely different product that outperforms the old one.” Id.

104 Id. For example, both cable and DSL providers were well aware of VoIP as a viable technology, although neither had sufficient incentive to commercialize the product. See FERGUSON, supra note 39, at 4-5 (arguing that cable providers and “incumbent local exchange carriers” have a shared interest in preventing “open-architecture broadband competition”).

105 SULLIVAN & GRIMES, supra note 102, at 13.

106 To achieve the goal of increased competition, the FCC seeks to provide incentives for developing technologies such as satellite, 3G, WiFi, and power line broadband to enter the broadband services market. See supra note 74. After the Brand X Court’s upholding of the FCC’s “information service” determination for cable, and the FCC’s subsequent reclassification of DSL as an information service, see supra notes 66-68 and accompanying text, major companies such as Google began to invest heavily in alternative provider technologies. See Marguerite Reardon, Broadband’s Power-Line Push, CNET NEWS.COM, July 11, 2005, http://news.com.com/Broadbands+power-line+push/2100-1034_3-5780316.html (describing Google’s post-Brand X investment in broadband power line technology). Although increased competition looms in the future, the DSL/cable duopoly will likely remain steadfast. See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 F.C.C.R. 14,853, 14,884 (F.C.C. Aug. 5, 2005) (report and order and notice of proposed rulemaking) (“Given recent trends, the market penetration of cable modem and DSL broadband Internet access services, in particular, could grow dramatically in the future.”).

107 See SULLIVAN & GRIMES, supra note 102, at 775 (discussing how the deregulation of an industry may “enlarge the realm of antitrust”). In Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 412 (2004), the Supreme Court focused on “the existence of a regulatory structure designed to deter and remedy anticompetitive harm” in deciding whether to apply the refusal-to-deal doctrine to an antitrust claim. The Court recognized that “[w]here [a regulatory] structure exists, the additional benefit to competition provided by antitrust enforcement will tend to be small.” Id. But “[w]here, by contrast, ‘[t]here is nothing built into the regulatory scheme which performs the antitrust function,’ the benefits of antitrust are worth its sometimes considerable disadvantages.” Id. (citation omitted) (quoting Silver v. N.Y. Stock Exch., 373 U.S. 341, 358 (1963)).
from regulation toward the “competitive ideal,” antitrust law can be available if “conduct varies significantly from the competitive norm.” Some commentators who identify potential anticompetitive actions by broadband providers support a case-by-case approach, but are reluctant to support “a categorical requirement that all broadband [providers] make their networks available to all content and applications.”

This Comment concludes that, although antitrust concepts potentially could be applied effectively by the FCC or the FTC, the courts are currently the most effective forum for adjudicating anticompetitive acts by broadband providers. Thus, in the current environment, antitrust law should be the primary method to protect innovation and ensure that the competitive ideal is achieved in the market for the provision of broadband services.

IV. A BROADBAND PAY-TO-PLAY POLICY WOULD VIOLATE ANTITRUST PRINCIPLES

This Part focuses on the potential antitrust violations a pay-to-play system might encounter in an era of reduced FCC regulation of information services. The proposed pay-to-play system would have se-

108 SULLIVAN & GRIMES, supra note 102, at 775.
109 An anticompetitive action could be, for example, “a broadband provider bar[ring] access to an Internet application that competes directly with its core business.” Yoo, supra note 95, at 1899.
110 Id. at 1899-1900 (arguing that “blanket” restrictions are the wrong approach to anticompetitive behavior by broadband providers); see also supra note 101 (describing David Farber’s belief that antitrust law is sufficient to protect Internet application competition).
111 For a recommendation on how the FCC should regulate broadband, see ATKINSON & WEISER, supra note 46. Atkinson and Weiser suggest a three-part solution to the regulation of broadband, largely focusing on congressional empowerment of the FCC to monitor broadband providers’ “access and usage policies” as well as to “oversee[] the use of discriminatory access arrangements to make sure that any such arrangements do not harm competition (and consumers).” Id. at 2. Atkinson and Weiser recommend that the FCC should respond to claims using an “expedited,” “adjudicative,” “antitrust-like” approach. Id. They reason that, “[u]nder such a model, a firm that suspected discrimination in favor of a competitor could commence a proceeding to challenge that practice and be assured of a timely response.” Id. at 13. Although “the FCC [may] arguably possess the authority today (under its ancillary jurisdiction) to implement [Atkinson and Weiser’s] model of regulation,” the “antitrust-like” approach is unlikely to be implemented without specific congressional confirmation of such authority. Id.; see also supra Part IIIA (concluding that in the near future, the FCC is likely to take a hands-off approach to broadband regulation).
112 See supra notes 76-85 and accompanying text.
vere exclusionary effects that would threaten to destroy the established competitive norm in Internet applications. By unfairly increasing rivals’ costs, broadband providers could be guilty of monopolization, which would violate section 2 of the Sherman Act.\footnote{1325}

A. The Monopolization Claim Against a Pay-To-Play System

Under antitrust law, the offense of monopolization has two elements: “(1) [T]he possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”\footnote{1326}

1. Monopoly Power Test

In a monopoly power analysis under section 2 of the Sherman Act, the primary question concerns whether the defendant possesses “the power to control prices or exclude competition.”\footnote{134} Courts must first define the relevant product and geographic markets for each case presented.\footnote{136} Since the pay-to-play system would use broadband providers’ duopoly\footnote{137} power in fiber optic networks to harm competitors

\footnote{135} Id. at 571 (quoting United States v. E.I. du Pont De Nemours & Co., 351 U.S. 377, 391 (1956)); see also SULLIVAN & GRIMES, supra note 102, at 86 (“The ultimate question concerning power is whether the defendant possesses power over price and the power to exclude competition.”).
\footnote{136} See SULLIVAN & GRIMES, supra note 102, at 86-87 (describing how courts define the relevant product and geographical markets).
\footnote{137} Normally, monopoly power under section 2 of the Sherman Act requires proof of a single-firm monopoly. Nonetheless, whether the conduct of duopolistic firms acting in tacit collusion creates a monopoly remains an open question. Compare Morgenstern v. Wilson, 29 F.3d 1291, 1295 n.2 (8th Cir. 1994) (recognizing a “split in authority” on the question of whether a monopolization claim may be proven by “combining the market power of multiple defendants”), and Harkins Amusement Enters., Inc. v. Gen. Cinema Corp., 850 F.2d 477, 490 (9th Cir. 1988) (refusing to decide “whether a shared monopoly theory may be viable under some circumstances” because the instant case provided no risk of a shared monopoly), and Santana Prod., Inc. v. Sylvester & Assoc., Ltd., 121 F. Supp. 2d 729, 737 (E.D.N.Y. 1999) (quoting Professors Areeda and Hovenkamp’s suggestion that “Section 2 may be invoked against shared monopolies in which no single firm possesses sufficient power to be considered a ‘monopolist’ but nevertheless a relatively few firms achieve monopoly-like results”), with Indiana Grocery, Inc. v. Super Valu Stores, Inc., 864 F.2d 1409, 1416 (7th Cir. 1989) (holding that the plaintiff’s theory “at best . . . poses the danger that [the defendant’s] . . . anticompetitive conduct could result in diminished price competition in an oligopolistic, or at worst, duopolistic market. Section 2, however, does not govern single-firm anticom-
in the applications market, the relevant product market would be the provision of broadband services. The geographic market for monopoly power is the region where the broadband companies provide service to end users. For example, Cox Communications operates in limited areas within the United States, so its “geographic market,” for the purpose of a monopoly analysis, would include only those regions where it does offer broadband service.

Next, courts likely would look to the “cross-elasticity of demand” to determine the market power of broadband providers in the relevant geographic markets. Presently, the provision of broadband services is a duopoly; the only significant participants are DSL and cable providers. As of the end of 2005, DSL and cable providers held over 90% of the broadband market. In addition, many consumers have little or no choice between broadband providers. To illustrate, 91% of zip codes only have either one or zero cable providers to choose from. Thus, even those consumers who can choose between cable and DSL lack meaningful choice, which suggests a low cross-elasticity of demand.

Those who argue against NN regulations often claim that competition between broadband providers will protect consumer prefer-
ences and maintain innovation. For example, they contend that if a DSL provider institutes a pay-to-play system, consumers can switch their Internet service to another broadband provider. Although this claim may prevail once the broadband services industry has achieved the competitive ideal with a variety of providers—such as DSL, cable, power line, satellite, WiFi, and 3G—offering broadband services, the U.S. broadband market is still far from this competitive ideal. Alternative broadband networks hold less than 2% of the current residential market. Thus, since about 58% of zip codes have zero or one asymmetric DSL provider, in most areas of the country the only other choice for a consumer may be a cable provider. Therefore, in today’s market, DSL and cable broadband service hold duopoly power.

In addition to maintaining duopoly power, both DSL and cable providers have been signaling to one another their respective plans to institute a pay-to-play system. Due to the duopolistic nature of the market—high concentration, barriers to entry, diffused buyers, transparent sales, largely homogeneous products, excess capacity, and contracts terminable at will—the likelihood of parallelism is extremely high. Thus, due to a captive consumer base and complete control over fiberoptic networks, broadband providers have market power.

123 See, e.g., Yoo, supra note 95, at 1894 (“The presence of competition drastically reduces the ability of network owners to use exclusivity arrangements to harm competition because disgruntled consumers can simply transfer their subscriptions to another network.”).
124 INDUS. ANALYSIS & TECH. DIV., supra note 121, at chart 6. For the considerable future, there likely will be only two dominant, partially competitive types of broadband service. Id.
125 Id. at tbl.16.
126 On its face, the FCC data shows an increase in the number of competing broadband providers and decreased market concentration. See, e.g., id. at tbl.8 & 16. However, the FCC’s data and market analysis have been criticized for inaccurately overestimating consumer choice. See S. DEREK TURNER, BROADBAND REALITY CHECK II: THE TRUTH BEHIND AMERICA’S DIGITAL DECLINE 19 (2006) available at http://www.freepress.net/docs/bbrc2-final.pdf (generally criticizing the FCC’s broadband data collection and analysis); U.S. GOV’T ACCOUNTABILITY OFFICE, TELECOMMUNICATIONS: BROADBAND DEPLOYMENT IS EXTENSIVE THROUGHOUT THE UNITED STATES, BUT IT IS DIFFICULT TO ASSESS THE EXTENT OF DEPLOYMENT GAPS IN RURAL AREAS (2006) available at http://www.gao.gov/new.items/d06426.pdf (reassessing several of the FCC’s broadband conclusions regarding consumer choices).
127 Broadband providers have been announcing their plans to institute a pay-to-play system through the media. See supra notes 1-3 and accompanying text.
For the purposes of this Comment, I refer to cable and DSL providers in general terms. Although distinct broadband providers exist for each type of technology, I believe there are reasons to safely make generalized references here. First, “the top two cable companies and the top two DSL companies together controlled over half of the U.S. broadband market.” Thus, there remains significant concentration in the broadband market. Second, the “U.S. broadband market is essentially a series of regional duopolies.” According to a recent study by the Government Accountability Office (GAO), “the median number of providers available to consumers [is] just two.” Thus, the majority of broadband consumers have, at most, one choice: the choice between cable and DSL.

2. Conduct Test: Refusal To Deal

Unfair competition can seriously harm consumers, particularly when marked by “overly aggressive or predatory strategies.” “Competition on the merits” is to be protected, but in the time-sensitive application market, a pay-to-play system would foreclose such competition. A price buffer would separate broadband providers from independent VoIP rivals, making it nearly impossible for these companies to compete based on quality of service, design of application, and other aspects.

Although section 2 of the Sherman Act provides multiple avenues to pursue antitrust liability, a pay-to-play system would most signifi-

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129 Of course, in order to make an actual determination of market power it is necessary to compile detailed market data.
130 Turner, supra note 126, at 19.
131 Id.
132 Id. (citing TELECOMMUNICATIONS, supra note 126). The GAO criticized the FCC’s most recent broadband data, in which the FCC concluded that “the median number of providers” was eight. TELECOMMUNICATIONS, supra note 126.
133 SULLIVAN & GRIMES, supra note 102, at 105.
134 Id.
135 For example, Internet application companies also may have a claim under the “essential facilities doctrine.” Although several U.S. Circuit Courts of Appeals have adopted this doctrine, the Supreme Court has neither rejected nor adopted it to date. See Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 411 (2004) (“We have never recognized [the essential facilities] doctrine, and we find no need either to recognize it or to repudiate it here.” (citation omitted))). In order to establish antitrust liability under the essential facilities doctrine, a party must prove four factors: “(1) control of the essential facility by a monopolist; (2) a competitor’s inability practically or reasonably to duplicate the essential
cantly violate the “conduct test” by breaching the limited duty of a monopolist to continue to deal with competitors.

Generally, there is no absolute duty imposed upon a monopolist to deal or cooperate with competitors. However, a monopolist may have a duty to deal with rivals in some circumstances. A monopolist may violate its duty to deal, for instance, when it foregoes an established complementary relationship with a rival for an exclusionary purpose. Aspen Skiing v. Aspen Highlands Skiing Corp., Eastman Kodak Co. v. Image Technical Services, Inc., and their progeny support the general rule that “a firm with monopoly power violates Sherman Act § 2 if it excludes rivals from the monopolized market by restricting a complementary or collaborative relationship without an adequate business justification.” Although courts and scholars have defined exclusion in a variety of ways, one helpful definition describes it as “a practice that ‘raises rival’s costs,’ either directly or indirectly through foreclosing a rival from inexpensive access to customers.”

facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility to competitors.” Robert Pitofsky et al., The Essential Facilities Doctrine Under U.S. Antitrust Law, 70 ANTITRUST L.J. 443, 448 (2002) (quoting MCI Commc’ns Corp. v. AT&T Co., 708 F.2d 1081, 1132-33 (7th Cir. 1983)). Although its elements of proof are slightly different, the essential facilities doctrine is similar to the refusal-to-deal doctrine in a key way: “The defendant’s duty to deal in the essential facility cases appears to have about the same scope as the defendant’s duty to deal in the Aspen case, where the Court did not rely on the essential facility doctrine.” Herven Hovenkamp, Federal Antitrust Policy: The Law of Competition and Its Practice 307 (2d ed. 1999).

136 Trinko, 540 U.S. at 411 (discussing exceptions to the general “proposition that there is no duty to aid competitors”).

137 See Sullivan & Grimes, supra note 102, at 114 (stating that “[a] monopolist’s duty to deal is likely to be found when such dealings enhance consumer welfare and when the refusal to deal raises rivals’ costs and has no efficiency or welfare-enhancing justification”).

138 See, e.g., Eastman Kodak Co. v. Image Technical Servs. Inc., 504 U.S. 451, 486 (1992) (denying summary judgment to the defendant in an antitrust claim where the defendant attempted to prohibit servicing of its equipment by independent companies); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 610-11 (1985) (holding that attempting to block a competing ski business from participating in a major-ticket program violated the duty to deal); see also Trinko, 540 U.S. at 410-11.


140 Id. at 496 n.9. In Aspen Skiing, “the Supreme Court defined exclusionary conduct as that which (1) tends to impair the opportunities of rivals, but also (2) either does not further meritorious competition or does so in an unnecessarily restrictive way.” Z-Tel Commc’ns, Inc. v. SBC Commc’ns, Inc., 331 F. Supp. 2d 513, 529 (E.D. Tex. 2004) (citing Aspen Skiing, 472 U.S. at 605 n.32); see also Eastman Kodak, 504 U.S. at 482-83 (“The second element of a § 2 claim is the use of monopoly power ‘to fore-
The Aspen Skiing litigation developed when Aspen Skiing Company (Ski Co.) refused to continue dealing with its smaller rival, Aspen Highlands Skiing Corporation (Highlands). For years prior to the litigation, Ski Co. and Highlands worked jointly to provide the “all-Aspen” ticket: a six-day ski ticket that allowed skiers to access the four mountains in Aspen at a rate discounted from the individual mountain rate. The two companies distributed revenues based on a randomized survey that determined “how many skiers with the [four]-area ticket used each mountain.” Although Ski Co. attempted to sell a competitive six-day ski ticket confined to its three mountains, the collaborative four-area ticket outsold it “nearly two to one.” Thus, as Jonathan Baker put it, even though the two mountains competed, “Highland’s product was a demand complement to Ski Co.’s product in producing the all-Aspen ski ticket.”

In 1978, Ski Co. threatened to discontinue the all-Aspen ticket unless Highlands accepted a percentage of revenues “considerably below Highland’s historical average based on usage.” When Highlands refused, Ski Co. offered a “three-area, six-day ticket featuring only its mountains.” Without participating in the all-Aspen ticket, “Highlands basically became a day ski area in a destination resort.” Thus, by being excluded from the all-Aspen ticket market, close competition, to gain a competitive advantage, or to destroy a competitor.” (quoting United States v. Griffith, 334 U.S. 100, 107 (1948) (citations omitted))); Thomas G. Krattenmaker et al., Monopoly Power and Market Power in Antitrust Law, 76 Geo. L.J. 241, 249 (1987) (discussing how a monopoly can either restrain output below competitive levels, raise its price above competitive levels, or increase rivals’ costs).
Highlands was placed at a significant competitive disadvantage and its “share of the market for downhill skiing services in Aspen declined steadily.”

The Supreme Court concluded that the evidence in the record was adequate to support a finding that Ski Co.’s behavior was unlawfully exclusionary under section 2 of the Sherman Act. The Court focused on Ski Co.’s abandonment of the profitable course of dealing, stressing that “the monopolist elected to make an important change in a pattern of distribution that had originated in a competitive market and had persisted for several years.” Important in the Court’s determination was the fact that Ski Co. “fail[ed] to offer any efficiency justification . . . for its pattern of conduct.” The Court concluded that “the monopolist made a deliberate effort to discourage its customers from doing business with its smaller rival.”

Although Aspen Skiing has been the subject of scholarly criticism over the years, and was deemed by Justice Scalia to be “at or near the outer boundary of § 2 liability,” the Supreme Court nevertheless unanimously reaffirmed that its Aspen Skiing holding regarding refusals to deal remains good law in Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP.

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150 Id. at 610-11.
151 Id. at 603.
152 Id. at 608.
153 Id. at 610. The Court also noted “that Ski Co. was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival.” Id. at 610-11.
154 For example, Professor Hovenkamp states that “[t]he difficult question for those supporting Aspen is finding a way of applying its principle, without losing control of it.” Hovenkamp, supra note 135, at 295.
156 Id.; see also Z-Tel Comm’ns, Inc. v. SBC Comm’ns, Inc., 331 F. Supp. 2d 513, 536 (E.D. Tex. 2004) (“The bottom line is that criticism notwithstanding, the Supreme Court reaffirmed that Aspen Skiing’s holding about unilateral refusals to deal is good law.”). In Trinko, the Supreme Court concluded that the plaintiff’s refusal-to-deal claims did “not fit within the limited exception recognized in Aspen Skiing.” Trinko, 540 U.S. at 409. The Court distinguished the Trinko defendant’s actions as statutorily compelled. Id. Thus, without a voluntary course of conduct to use as a baseline against which to compare the defendant’s present actions, “anticompetitive malice” could not be distinguished from “competitive zeal.” Id.; see also Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1188 (1st Cir. 1994) (refusing to apply the Aspen Skiing framework because the court was “unable to view [the defendant’s] mar-
In *Trinko*, the Supreme Court re-emphasized two of the three distinctive features of *Aspen Skiing* that made the imposition of liability appropriate. First, Ski Co.’s “unilateral termination of a voluntary (and thus presumably profitable) course of dealing suggested a willingness to forsake short-term profits to achieve an anticompetitive end.” In addition, Ski Co.’s “unwillingness to renew the ticket even if compensated at retail price revealed a distinctly anticompetitive bent.”

Similar to *Aspen Skiing*, “the Kodak case emerged out of a change in a firm’s business policies that harmed rivals by exploiting a relationship involving product complements.” Kodak manufactured and sold “high-volume photocopiers and micrographic equipment.” In addition, it also separately sold repair services and replacement parts for its machines directly to its customers. For half a decade, Kodak also sold replacement parts to independent service organizations (ISOs), which would independently provide repair services to customers, often at a discounted rate. Thus, ISOs were Kodak’s rivals when servicing Kodak’s equipment, but they were also Kodak’s parts distributors. The litigation began after Kodak began selling replacement parts only to customers who either used Kodak’s repair services or repaired their own machines, rather than hiring ISOs. Through this policy, Kodak aimed to “make it more difficult for ISOs
to sell service for Kodak machines.\footnote{Id. at 458. Kodak achieved its goal by limiting ISO access to all sources of Kodak parts. \textit{Id.}} Most of the ISOs “lost substantial revenue” or were driven out of business.\footnote{Id.}

Although the Supreme Court largely focused on Kodak’s tying sales of service to sales of parts, the Court also determined that the ISOs had presented evidence from which a court could find “that Kodak took exclusionary action to maintain its parts monopoly and used its control over parts to strengthen its monopoly share of the Kodak service market.”\footnote{Id. at 483.} Thus, liability turned on “whether ‘valid business reasons’ [could] explain Kodak’s actions.”\footnote{Id. Kodak contended that it had three valid business justifications: “(1) to promote interbrand equipment competition by allowing Kodak to stress the quality of its service; (2) to improve asset management by reducing Kodak’s inventory costs; and (3) to prevent ISOs from free riding on Kodak’s capital investment in equipment, parts and service.” \textit{Id.}} The Court concluded that “[n]one of Kodak’s asserted business justifications” were sufficient to grant Kodak summary judgment.\footnote{Id. at 485-86.}

As Professor Baker explains, the legal analyses of the conduct requirement in the \textit{Aspen Skiing} and Kodak refusal-to-deal decisions have three key features in common. First, in both cases, “the Court found that a rival (or rivals) was substantially excluded from that market by defendant’s conduct, in the sense that the rival was weakened significantly (by a reduction in demand or increase in costs) or forced to exit.”\footnote{Id. at 483.} Second, the Court in both cases “found that the monopolist excluded its rival or rivals from the market where the two competed by exploiting another relationship between the two, either a collaborative or complementary one.”\footnote{Baker, \textit{supra} note 139, at 501.} In both \textit{Aspen Skiing} and \textit{Kodak}, the collaborative vertical relationship between the firms created an opportunity for the monopolist to exclude the plaintiff from the competitive horizontal market.\footnote{Id. “[A] change in prior conduct was a feature of both cases.” \textit{Id.} at 502.} Third, instead of directly considering the effect on competition, the Court inferred harm to competition “from the absence of a valid and sufficient business justification.”\footnote{Id.}
A pay-to-play system shares these three features and would have exclusionary effects on Internet application companies, like Vonage, that directly compete with broadband providers’ applications.

First, once a pay-to-play system is implemented, Internet application companies that rely on time-sensitive delivery will be effectively excluded from the market. Using the VoIP example, if the application company does not pay the required fee for priority delivery, there is a strong likelihood that its VoIP service will not work properly during periods of high congestion. The broadband provider, however, will always provide priority status to its own revenue-generating VoIP product, ensuring proper delivery of voice packets. On the other hand, if a VoIP application company did agree to pay a priority delivery fee to help guarantee the proper functioning of its service, broadband providers would have successfully put that company at an economic disadvantage by artificially raising its costs of doing business.

Under either scenario, VoIP application companies like Vonage would be “excluded” from the VoIP market.

Second, this exclusion from the market will become possible only because, with a pay-to-play system, broadband providers will be exploiting a vertical relationship that was previously complementary. Prior to the implementation of the pay-to-play system, broadband providers and Internet application companies shared a mutually beneficial relationship. The value of a broadband provider’s service ultimately depends on which applications and content it supports. Simply put, the more applications and content that are made accessi-

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174 This conduct is analogous to the harm created in *Kodak*. Because Kodak prevented access to its repair parts, the ISOs were unable to effectively perform their service. Assured a supply of parts, Kodak was the only one able to continue to provide repair services. *Eastman Kodak*, 504 U.S. at 458.

175 This scenario is similar to *Aspen Skiing*, in which Ski Co. threatened to cut off the all-Aspen pass unless Highlands accepted reduced compensation. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 592 (1985). Ski Co.‘s action was essentially a pay-to-play policy. After Highlands refused and Ski Co. terminated its participation in the all-Aspen pass, Highlands attempted to create a multiple-mountain pass by purchasing lift tickets to Ski Co.’s mountains at retail. *Id.* at 593-94. Thus, as a result of the exclusionary tactics, Highlands was forced to sell its multiple-mountain pass at a much higher price than the Ski Co. multiple-mountain pass, or else risk more significant losses. *Id.*

176 See Baker, *supra* note 139, at 496 n.9 (defining exclusion as forcing a rival to exit the market or weakening the rival “significantly” by increasing its costs or reducing demand for its services).

177 See Wu, *supra* note 4, at 85 (describing the appeal of broadband as linked to its ability to accept a variety of content).
ble, the more a consumer is willing to pay for her broadband connection. As a result, broadband providers owe most of their financial success to the development of applications and content. Thus, to date, most broadband providers have maintained large “downstream” access in order to attract customers to their services.

Many commentators argue that, despite the current pay-to-play musings, broadband providers have an incentive to maintain open platforms in order to bring the highest value to the end user. As evidence, they point to the failure of Internet providers that did not preserve application open access (specifically, Prodigy and CompuServ). These commentators believe that vertical integration often leads to important efficiencies and is not dangerous to competition. Their argument suggests that, to a “platform monopolist” like a broadband provider,

the applications are its inputs, and the monopolist has the same interest as any other party in minimizing its input costs. Hence, if allowing open application development saves the monopolist money, then it will do so... This analysis leads to a presumption that, in the telecommunications market, vertically integrated companies, even with monopoly power, should generally be left unregulated, absent special conditions, or exceptions.

The pay-to-play situation, though, embodies one of these exceptions: a company may take anticompetitive actions against applications that ride on its networks when that company’s “revenue stream

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178. It is also important to note that the development of applications and the success of businesses such as Vonage or Napster would not have been possible without high speed fiberoptic networks.
179. See Wu, supra note 16, at 162-63 (describing broadband providers’ present restrictions on network use). For a comprehensive discussion of network restrictions see id. at 156-65.
180. See Yoo, supra note 95, at 1888 (“The failure of early proprietary services provided by America Online, CompuServe, and Prodigy attests to the market’s ability to discipline network owners who attempt to impose closed architectures on consumers who prefer open ones.”). CompuServ and Prodigy maintained “self-contained ‘walled garden’ networks,” in which subscribers’ connections were limited to other members and centralized content. Jonathan L. Zittrain, The Generative Internet, 119 HARV. L. REV. 1974, 1991 (2006). Their networks were “slow to evolve because potential audiences of developers were slowed or shut out by centralized control over the network’s services.” Id.
182. Wu, supra note 4, at 86.
[may] be endangered by allowing unmitigated competition among unaffiliated applications." For example, Madison River Communications blocked Vonage’s VoIP service on its broadband network. In balancing the value of its traditional public switched telephone service against the value of its broadband service, Madison River chose to degrade its broadband network in order to protect its “voice-based revenues.” Similarly, as Internet-based video services grow in popularity and availability, “it is quite possible that cable providers . . . may face similar incentives” to block or degrade rival applications offering video over the Internet. Thus, although there is economic theory suggesting that broadband providers will not exploit their complementary relationships with Internet application companies, actual experience demonstrates that broadband providers have incentives to protect their core businesses at the expense of the Internet application companies.

Internet application companies, relying upon the mutually beneficial relationship with broadband providers, have spent capital developing innovative applications, many of which require time-sensitive delivery. Broadband providers have recognized the cost advantages of a VoIP telephony system and have entered the market as horizontal competitors. However, instead of competing on the merits, they seek to monopolize the VoIP market by exploiting their position of controlling the last mile to the end user. By raising the cost of competing for rival VoIP providers, broadband providers are exploiting access to consumers that they never would have had were it not for open-access networks and innovations created by Internet application companies.

Nobody in Particular Presents, Inc. v. Clear Channel Communications, Inc. provides a similar factual situation, in which the owner of a radio station exploited a complementary relationship with local concert promoters in order to gain a monopoly in the concert promotion market. The plaintiff, Nobody in Particular Presents, Inc. (NIPP), pro-
moted concerts in the Denver, Colorado, area. The defendant, Clear Channel Communications, was “one of the largest radio and entertainment conglomerates in the world.” Clear Channel owned and operated eight radio stations in Denver. It also owned SFX/Clear Channel Entertainment (SFX), a national concert promotions division, and Clear Channel Radio Festivals (Festivals), a radio concert promotions division.

Both nationally and in the Denver market, radio stations and concert promoters share a complementary relationship. As the NIPP Court explained, “[b]y advertising [a] concert, the radio generates more interest in the artist, which encourages listeners to listen to the radio to hear about the artist’s concert and to hear the artist’s songs.” It is customary, therefore, for radio stations to “promote” concerts for free, above and beyond the advertising time purchased by the concert promoter, by mentioning the concert on-air, holding ticket giveaways, and conducting interviews with artists. Such free promotion greatly benefits the concert promoter as well as the station by generating publicity and demand for the concert.

However, when Clear Channel entered the concert promotion business, its radio stations immediately stopped providing free promotional support and advertising to any rival concert promoters. NIPP alleged that, as soon as Clear Channel became a horizontal competitor, Clear Channel gave “preferential treatment to its [own] concert promotion business.” Although no rival promoters were allowed to have contact with Clear Channel’s radio program, music, or promotions directors, SFX was “free to continue to have direct conversations with [Clear Channel radio stations] concerning concert promotion in the Denver market.”

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189 Id. at 1055.
190 Id. at 1056.
191 Id. Eight was the maximum number of radio stations that one media company was allowed to own in the Denver area under the FCC rules. Id.
192 SFX was the “largest concert producer and entertainment promoter in the nation.” Id.
193 Although “radio stations derive most of their income from advertisers who pay for advertising spots,” they also receive significant benefits from assisting concert promoters on air. Id. at 1060.
194 Id.
195 Id. at 1060-61 (citation omitted).
196 Id. at 1063-64.
197 Id. at 1064.
198 Id.
Citing *Aspen Skiing*, the U.S. District Court for the District of Colorado concluded that Clear Channel’s refusal to provide free promotional support “is . . . in the worst interest of Clear Channel radio stations, which demonstrates an intent to monopolize.”

Thus, the court held that Clear Channel’s refusal to deal “compels a trial on the issue of anticompetitive conduct in this case.”

Similar to broadband providers’ artificial increase of competing Internet application companies’ costs through the pay-to-play system, the Clear Channel radio stations increased the costs of all other rival concert promoters by withholding previously complimentary on-air concert promotion. In addition, just as applications help to drive the value of broadband service, a portion of the financial success of the Clear Channel radio stations could be attributed to the complementary relationship with the independent concert promoters. Thus, Clear Channel exploited the previously complementary relationship with concert promoters in order to monopolize the concert promotions market.

Third, and finally, in both *Aspen Skiing* and *Kodak*, the Court inferred harm to competition from the lack of business justification for the conduct. In analyzing conduct under a rule-of-reason standard, violative “exclusionary strategies . . . must be distinguished from beneficial or benign competitive methods that will be tolerated even from a monopolist.” Thus, a broadband provider must offer a “procompetitive justification” for its conduct. The plaintiff may establish liability if it can rebut the justification or “demonstrate that the anticompetitive harm of the conduct outweighs the procompetitive benefit.” This is where the ultimate battleground lies for determining liability.

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199 *Id.* at 1106-07. Important to the district court’s conclusion was that Clear Channel seemed to act against its own “commercial best interest” by refusing to provide advertising and promotional support to promoters. *Id.* at 1107 (“Assuming that the refusal to deal is not in the best commercial interests of the radio stations, an inference could be made that the refusal supports other, more sinister motives, such as the creation of a monopoly.”). NIPP was also able to demonstrate “an increase in concert ticket prices and a decreasing market share for all of Clear Channel’s competitors in the rock concert market” following Clear Channel’s refusal to deal. *Id.*

200 *Id.* at 1108.

201 See *supra* note 173 and accompanying text.

202 SULLIVAN & GRIMES, *supra* note 102, at 105.

203 See United States v. Microsoft Corp., 253 F.3d 34, 59 (D.C. Cir. 2001) (defining a “procompetitive justification” as “a nonpretextual claim that its conduct is indeed a form of competition on the merits”).

204 *Id.*
The procompetitive justifications that broadband providers are likely to offer in defense of an antitrust claim are (1) the prevention of free riding upon their capital investments, \(^{205}\) (2) the need to ensure quality service, \(^{206}\) and (3) a lack of economic incentive to engage in such exclusionary activities.

First and foremost, broadband providers assert that Internet application companies are free riding on their “pipes.” \(^{207}\) This contention is similar to an argument presented in *Kodak*. Kodak attempted to justify its exclusionary conduct as “prevent[ing] ISOs from free-riding on Kodak’s capital investment in equipment, parts and service.” \(^{208}\) Both sides admitted that the ISOs “invest[ed] substantially in the service market, with training of repair workers and investment in parts inventory.” \(^{209}\) Kodak asserted that “the ISO’s [were] free-riding because they . . . failed to enter the equipment and parts markets.” \(^{210}\) The Court rejected this justification outright, explaining that “[t]his understanding of free-riding has no support in our case law.” \(^{211}\) The Court noted that it would be unreasonable and contrary to the antitrust laws to require a competitor “to enter two markets simultaneously” in order to compete.

Similar to the ISOs in *Kodak*, Internet application companies have made considerable investments in developing their applications. Broadband providers cannot claim, as required under *Kodak*, that the application companies are free riding on their investments in compet-

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\(^{205}\) See supra note 2 and accompanying text (describing broadband providers’ promotion of the free rider argument).

\(^{206}\) See supra notes 51-52 and accompanying text (specifying quality service and efficiency as benefits of smart pipes).

\(^{207}\) AT&T Chairman Edward E. Whitacre Jr. recently argued: “‘They don’t have any fiber out there. They don’t have any wires . . . They use my lines for free—and that’s bull. For a Google or a Yahoo or a Vonage or anybody to expect to use these pipes for free is nuts!’” Christopher Stern, *The Coming Tug of War over the Internet*, WASH. POST, Jan. 22, 2006, at B1.


\(^{209}\) Id. at 485.

\(^{210}\) Id.

\(^{211}\) Id. The Supreme Court distinguished Kodak’s asserted free-rider justification from both *Continental T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977), and *Monsanto Co. v. Spray-Rite Service Corp.*, 465 U.S. 752 (1984), where “the Court accepted free-riding as a justification because without restrictions a manufacturer would not be able to induce competent and aggressive retailers to make the kind of investment of capital and labor necessary to distribute the product.” *Eastman Kodak*, 504 U.S. at 485 n.33.

\(^{212}\) *Eastman Kodak*, 504 U.S. at 485 (“[O]ne of the evils proscribed by the antitrust laws is the creation of entry barriers to potential competitors by requiring them to enter two markets simultaneously.”).
ing applications. Instead, they implicitly resort to the argument rejected by the *Kodak* Court: that in order to avoid free riding, the application companies must enter both the application and broadband markets.\(^{213}\) Thus, using the pay-to-play system to prevent free riding is not a legitimate business justification under antitrust law.

As an alternative justification, the broadband providers assert that a pay-to-play system is a fair and reasonable method of ensuring quality service to the end user. They argue that, due to increased congestion of the networks, it is necessary to build high bandwidth fiber optic networks optimized for time-sensitive applications, such as voice, music, or video delivery.\(^{214}\) In order to maintain the high quality of service to end users on the optimized lines, they claim that they must use “smart pipe” technology to assign different levels of priority to different applications.\(^{215}\) Thus, the argument goes, the pay-to-play system takes advantage of this new market created for priority delivery and is in no way meant to affect the applications that compete with broadband providers’ core revenue-generating services (generally, phone or video services).

However, similar to the situation in *Aspen Skiing*, the broadband providers are foregoing short-term gains for long-term monopoly power. In *Aspen Skiing*, the Court pointed out that Ski Co. placed its sunk investment at risk by refusing to continue past welfare-enhancing cooperation.\(^{216}\) Similarly, in the context of VoIP, broadband providers that are implementing a pay-to-play system are degrading the value of their networks by reducing the number of applications effectively reaching the end consumer and by significantly increasing their trans-

\(^{213}\) See Stern, *supra* note 207, at B1. AT&T Chairman Whitacre emphasizes the fact that Internet application companies “don’t have any wires.” *Id.* Thus, he suggests that such companies must build their own networks in order to avoid free riding upon his company’s pipes.

\(^{214}\) See Yoo, *supra* note 17, at 35-36 (explaining that increased consumer demand causes the need to upgrade the networks).

\(^{215}\) See *id.* at 36 (discussing broadband providers’ consideration of “policy-based routers” to prioritize applications).

\(^{216}\) *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610-11 (1985) (“[T]he evidence supports an inference that Ski Co. was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival.”); *see also Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004) (“The unilateral termination of a voluntary (and thus presumably profitable) course of dealing suggested a willingness to forsake short-term profits to achieve an anticompetitive end.” (emphasis omitted)).
action costs of monitoring their networks.\footnote{See Yoo, supra note 95, at 1875 (describing the significant transaction costs associated with metering Internet usage). Yoo suggests that usage-sensitive pricing would be uneconomical and possibly more substantial than metering costs for the telephone industry, in which “the costs of metering and billing represent more than 50% of the costs associated with an incremental call.” \textit{Id.} at 1868, 1875. Internet protocols break “every piece of communication into smaller packets that are transmitted individually and reassembled at their destination.” \textit{Id.} at 1875. Since “each packet is allowed to move independently . . . it is possible that different packets from the same communications to pass through different routes on their way to their destination.” \textit{Id.} Thus, “the number of records needed to account for the packets associated with a ten-minute telephone call over the Internet could number in the tens of thousands.” \textit{Id.} As a result, “the industry has struggled to develop workable methods for metering Internet usage.” \textit{Id.}} Even if broadband providers recoup some of these losses through the pay-to-play system,\footnote{Broadband providers may also argue that the pay-to-play system, unlike Ski Co.’s three-mountain pass, was designed to increase both short-term and long-term profits. However, in \textit{Delaware & Hudson Railway Co. v. Consolidated Rail Corp.}, 902 F.2d 174, 178 (2d Cir. 1990), the Second Circuit rejected the alleged monopolist’s claim that the maximization of profits provided a sufficient legitimate business justification for its refusal to deal with a competitor. The court held that “[a] monopolist cannot escape liability for conduct that is otherwise actionable simply because that conduct also provides short-term profits.” \textit{Id.}} the extremely high cost of implementing such a system implicates another incentive for doing so—long-term monopoly power.\footnote{See \textit{Trinko}}, 540 U.S. at 409 (emphasizing the significance of Ski Co.’s willingness in \textit{Aspen Skiing} “to forsake short-term profits to achieve a long-run anticompetitive end”). This is strong evidence that the broadband providers’ quality service justifications are pretextual.

Even if a court concludes that the quality-service argument is strong and creates a legitimate business justification, a plaintiff still may establish liability by showing that the anticompetitive harm outweighs the procompetitive benefit.\footnote{Since the broadband providers may be able to present a legitimate business justification, a court likely would engage in a rule-of-reason balancing of procompetitive benefits versus anticompetitive effects of such conduct. See \textit{United States v. Microsoft Corp.}, 253 F.3d 34, 58-59 (D.C. Cir. 2001) (explaining the rule-of-reason analysis).} In the VoIP context, the potential for anticompetitive harm is significant. The pay-to-play system increases rival costs considerably, thus effectively excluding them from the market.

Finally, commentators like Christopher Yoo, who support the freedom for broadband companies to experiment with different pric-
ing strategies,221 often cite the Chicago School of Economics’ “one monopoly rent” theory (also referred to as the “one monopoly profit” theory) in justifying the broadband companies’ vertical integration into the application market for VoIP.222 They argue that, under either

the one monopoly rent theory or its broader version, called “ICE,” the companies will “internalize complementary efficiencies arising from [Internet] applications created by others.”223 As a result, the argument goes, the broadband companies have no economic incentive to exclude their competitors from the market.

Although this theory is largely accepted by academics, there are two major exceptions to the general rule. First, efficient competition in the applications market can be problematic to achieve if one of the competitors controls the platform. During the early stages of deployment, a platform provider, such as a broadband company, has “incentives to organize service innovation efficiently.”224 But, Joseph Farrell explains, this incentive loses its force as the platform provider becomes able to collect “quasi-rents,” thereby gaining the incentive to “sabotage” innovations.225 The pay-to-play system that broadband providers plan to institute signals exactly this type of sabotage to independent VoIP companies.

Second, if the one monopoly rent theory were controlling, a DSL provider would be pleased to grant VoIP applications free access to its network because the applications would make the network more valuable to users and, therefore, more profitable for the DSL provider.226


222 See Yoo, supra note 95, at 1888 (arguing that the “one monopoly rent theorem” holds in the context of broadband).

223 Farrell & Weiser, supra note 181, at 97-105. Farrell and Weiser have reformulated the theory—under the name “one monopoly profit” theory—into a broader claim that they call “internalizing complementary efficiencies” or “ICE.” Id. They explain that the “‘one monopoly profit’ label captures only part of ICE.” Id. at 104. Both ICE and the “one monopoly profit” theory “claim[] that a platform monopolist cannot gain by inefficiently leveraging its market power into applications.” Id. “But ICE goes further, stressing the broader principle that the platform monopolist gains from an efficient applications market . . . .” Id. For the purposes of this discussion, the theories are coterminous.


225 Id.

226 See Farrell & Weiser, supra note 181, at 109 (“[C]onsider the attitude of cable providers toward streaming video applications over their cable modems. ICE would
However, as Joseph Farrell and Philip Weiser explain, “a cable provider who allows video streaming will find it harder to engage in the profitable and customary price discrimination that sets high markups for premium cable programming,” and thus, “might rationally, but inefficiently, try to stop this innovative method of distribution.” Similarly, a DSL provider that allows VoIP calls on its network will find it much more difficult to price discriminate and profit from its traditional public switched telephone services. Thus, rather than allowing Internet application companies to offer VoIP to its customers, a DSL provider might instead focus on stifling VoIP’s development and proliferation.

B. Effect on the Market: What if Application Companies Win?

Under the Aspen and Kodak frameworks, broadband providers may be held accountable for establishing a pay-to-play system for companies with which they directly compete in the application market. In the case of VoIP, even if application companies greatly increase their subscriber numbers, the applications will not have an appreciable effect on broadband traffic. Just over the horizon, however, looms the potential for HD-quality video. What will happen if application companies, shielded by this precedent, begin to use larger and larger amounts of bandwidth?

According to Gary R. Bachula, Vice President of Internet2, this question has already been answered in practice in the form of Internet2. Internet2 is a not-for-profit partnership whose “mission is to advance the state of the Internet . . . by operating for [its] members a very advanced, private, ultra-high-speed research and education network called Abilene.” Abilene allows users to “live in the future’ of advanced broadband.”

suggest that cable providers should happily endorse this use of their platform, as it would make the platform more valuable to users and therefore more profitable.”).

Id.

227 Id.

228 Hearing, supra note 90, at 65 (testimony of Gary R. Bachula). Abilene provides “very high speed pipes [that are] 10,000 times faster than home broadband,” in order to enable its members to innovate by “try[ing] new uses of the network, develop[ing] new applications, [and] experiment[ing] with new forms of communications.” Id.

229 Id. Users are able to take classes with teachers across the globe via “DVD-quality video conferencing technology,” and “[r]ecently, students at Wichita State were able to play and take lessons from the New World Symphony in Miami using Internet2’s network.” Id.
While designing this network, Internet2 engineers assumed that a “smart pipe” that prioritized certain “bits” over others would be necessary to assure prompt delivery of time-sensitive packets. For years, engineers thus attempted to ensure quality of service by inserting intelligence into the network; however, as the network developed, “research and practical experience supported the conclusion that it was far more cost effective to simply provide more bandwidth.” The researchers found that a sufficient increase in bandwidth alleviated congestion and removed the need to provide “preferential treatment” for time-sensitive packets.

Experience has shown that the costs of improving the bandwidth of a network are not too steep:

For example, a university campus in the Midwest that serves 14,000 students and faculty recently estimated it would cost about $50 a year per user . . . to upgrade to 1000 Mbps . . . . University campuses are like small towns or suburban neighborhoods. Once [broadband providers] make their initial fiber investment, the relative cost of upgrading bandwidth to customers is small.

The antitrust framework outlined in this Comment would not prevent broadband providers from charging consumers for different levels of access to bandwidth. Thus, broadband providers would have ample incentives to upgrade their networks’ bandwidth capacities.

C. Use of “Judicial” Antitrust

The use of antitrust principles to remedy anticompetitive harms in the broadband and Internet application markets is a pragmatic approach that avoids the necessity of overly broad government legislation, while preserving innovation and competition on the merits.

1. Antitrust in the New Economy

Although “[a]ntitrust law is often characterized as an alternative to regulation,” some argue that antitrust courts should generally refrain from intervening in “new economy” monopolization cases.
support of this position, commentators often point to the Schumpet-
erian critique and the risk of false positives. 235

First, under the Schumpeterian view, market success entices rival
companies to enter the market and develop “new technologies that
will ultimately unseat the incumbent.” 236 As a result, “any market
power enjoyed by a dominant firm will be temporary.” 237 Thus, anti-
trust enforcement is “at best unnecessary and at worst counterpro-
ductive.” 238 In Trinko, Justice Scalia acknowledged the Schumpeterian
viewpoint, noting that “[t]he opportunity to charge monopoly prices . . . induces risk taking that produces innovation and economic
growth.” 239

However, courts have largely been unwilling to “accept a reduced
role for antitrust.” 240 Philip Weiser suggests that this reluctance “rests
on a sound theoretical and empirical basis.” 241 For example, he rec-
ognizes that “entrenched firms with monopoly power . . . will often
decline to deploy new technologies and will seek to undermine the
success of those that do.” 242 Thus, antitrust plays “an important role”
in protecting the entry of innovative companies, like Vonage, who “de-
ploy new technologies that will challenge the position of incumbent
firms.” 243

Second, the concern about false positives highlights the awareness
that overzealous antitrust courts can ultimately suppress efficient prac-
tices and harm consumer welfare. 244 In Trinko, as Weiser points out,
“the Court echoed this concern by noting that “[t]he cost of false posi-
tives counsels against an undue expansion of § 2 liability.” 245

“regulation and antitrust aim at ‘similar goals’” (quoting Town of Concord v. Boston
Edison Co., 915 F.2d 17, 22 (1st Cir. 1990) (Breyer, J.)).

235 Id. at 551.
236 Id. at 552.
237 Id.
238 Id.
240 Weiser, supra note 234, at 552.
241 Id.
242 Id. at 553; see also notes 180-186 and accompanying text (describing the risk
that broadband providers will harm Internet application companies that threaten their
core businesses).
243 Weiser, supra note 234, at 553.
244 Id. at 554. This concern is heightened when, in the “new economy,” the potential
effects of intrusion on the market “are less than clear.” Id.
245 Id. at 555 (quoting Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko,
LLP, 540 U.S. 398, 414 (2004)).
On the other hand, the risk of false negatives also presents challenges. If unchecked by antitrust principles, “monopoly firms”—such as broadband providers protecting their core voice or video businesses—“may well seek to slow the pace of innovation thereby ‘denying consumers the full benefits of technological progress that a dynamically competitive market would offer’.”  

The new economy—which includes the provision of broadband services and the development of Internet applications—presents both economic and legal challenges to regulators and courts alike. The arguments for antitrust forbearance in the new economy accurately illuminate the risks that an overzealous court may have on the market. But the risks created by not enforcing antitrust through the courts loom just as large. The focus should not be on whether courts should apply antitrust in the new economy; rather, the focus should be on when and how to apply the antitrust principles. Thus, even if antitrust courts should be cautious about engaging in the appropriate scrutiny, they continue to provide an important checking function against predatory conduct.

2. Town of Concord Principle

When examining the role of antitrust for regulated industries, such as the provision of broadband, “courts and commentators have struggled with the challenge of ensuring that regulation and antitrust coexist in a harmonious” manner. 247 The “Town of Concord principle” has emerged to define the bounds of antitrust liability when regulation exists. 248 According to the “discretionary version” of the principle, 249 which the Trinko Court seemed to endorse, 250 “the extent of ant-
titrust restraint should vary depending on whether the regulatory regime is reasonably effective at addressing the relevant anticompetitive conduct. Thus, the Town of Concord principle “should and will be applied on a case by case basis” requiring “antitrust courts to make two preliminary judgments: (1) ‘how well is the regulatory enterprise doing its job’; and (2) ‘how much confidence’ should we have that antitrust oversight will ‘improve competition in the situation at hand?’”

In applying the Town of Concord principle in Trinko, the Supreme Court determined that the Telecommunications Act of 1996 provided an “effective” level of “regulatory oversight.” Specifically, the Court stressed that where “a regulatory structure designed to deter and remedy anticompetitive harm . . . exists, the additional benefit to competition provided by antitrust enforcement will tend to be small, and it will be less plausible that the antitrust laws contemplate such additional scrutiny.” In assessing the Act, the Court highlighted a section granting the FCC authority for the “imposition of penalties” in the event of anticompetitive conduct. Thus, the Supreme Court concluded that, in this case, the “benefits of antitrust intervention” were “slight” and ultimately held that the respondent failed to state a claim under the Sherman Act.

In contrast to the Telecommunications Act’s regulation of traditional phone service that was at issue in Trinko, the regulation of broadband services and Internet applications has been significantly reduced. Although the FCC has taken action when an Internet application was blocked, it remains noncommittal toward an official policy regarding pay-to-play. In addition, the present form of the

251 Weiser, supra note 234, at 562.
252 Id. at 568 (quoting Herbert Hovenkamp, Antitrust and the Regulatory Enterprise, 2004 COLUM. BUS. L. REV. 335, 353-54).
254 Id. at 564.
255 Trinko, 540 U.S. at 412.
256 Id. at 413; Weiser, supra note 234, at 565.
257 Trinko, 540 U.S. at 414-16; Weiser, supra note 234, at 565.
258 See supra Part III.A (discussing the “lighter regulatory touch” by the FCC in the market for broadband Internet access).
259 See ATKINSON & WEISER, supra note 46, at 3 (noting that the FCC “act[ed] to ban the blocking of Vonage’s [VoIP] service by Madison River Communications”); see also supra notes 184-185 and accompanying text (describing Madison River Communications’s attempt to block Vonage’s VoIP service).
260 See supra note 71 and accompanying text (discussing FCC Chairman Martin’s statements regarding pay-to-play).
COPE Act would provide a toothless antitrust enforcement mechanism. Thus, the FCC is unlikely to effectively address anticompetitive conduct by broadband providers.

The next step under a *Town of Concord* analysis entails evaluating whether antitrust enforcement would “improve the competition in the situation at hand.” Thus, the focus should turn to available remedies. This Comment next discusses the remedies that antitrust courts have at their disposal.

3. Remedies

Antitrust remedies play an important role in both regulated and unregulated industries. However, in some situations, “antitrust law should refrain from providing relief.” For example, some cases may be identified as “irremedial because they would require certain judgments . . . that are outside the competence of antitrust courts.” In *Trinko*, the Court enthusiastically quoted Phillip Areeda’s analysis that “[n]o court should impose a duty to deal that it cannot explain or adequately and reasonably supervise. The problem should be deemed irremedia[ble] by antitrust law when compulsory access requires the court to assume the day-to-day controls characteristic of a regulatory agency.” Thus, in the duty-to-deal context, a court must be able to “provide meaningful relief without undertaking the role of a regulatory agency.”

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261 See discussion supra note 71. The maximum penalty for a violation of the FCC’s broadband policy statement would be a mere $500,000, and the FCC would be without authority to “adopt or implement rules or regulations regarding enforcement of the broadband policy statement.” H.R. 5252, 109th Cong. § 201 (2006).

262 See supra note 252 and accompanying text.

263 See Philip J. Weiser, Goldwasser, the Telecom Act, and Reflections on Antitrust Remedies, 55 Admin. L. Rev. 1, 7 (2003) (“[T]he availability of an antitrust remedy provides an important safety valve for and a backstop to the regulatory regime.”).

264 Id. at 9-10 (describing, under the *Town of Concord* principle, “three types of cases involving regulated entities where antitrust law should refrain from providing relief”).

265 Id. at 10. Instead, such judgments are often “within the core province of regulatory agencies.” Id.


267 Weiser, supra note 263, at 15.
According to Philip Weiser, there are several alternate approaches that would enable an antitrust court to provide such “meaningful relief.”

First, courts can rely on a prior course of dealing to provide relief. As discussed above, in *Aspen Skiing*, the Supreme Court relied in part upon the prior course of dealing in affirming a treble damages verdict. Weiser cautions, though, that such a remedy may be inadequate in fast-moving technology markets. As a result, when relying upon a prior course of conduct in the provision of broadband services, courts should be aware of market changes before determining the baseline for relief.

Second, Weiser explains, courts can rely on “an arrangement or industry custom regulated by a regulatory agency” in crafting a remedy. In *Otter Tail Power Co. v. United States*, the Supreme Court provided relief that was to be enforced by a regulatory agency instead of by the court. Thus, the *Otter Tail* approach allowed the Court to adjudicate an important antitrust case and “award relief without becoming mired in the day-to-day administration of a conduct remedy that a regulatory agency can better monitor.”

Third, courts can rely on a “non-discrimination standard whereby a company gives its competitor access to a facility on the same terms and conditions as it gives itself or a preferred customer.” This standard accounts for dynamic pricing schedules in an industry by setting a “moving benchmark for an access right.” In the broadband provider context, a court would have to compartmentalize a provider’s broadband service division and VoIP division and identify the transfer

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268 *Id.* at 18-20.
269 See *supra* note 157 and accompanying text (discussing the prior course of dealing in *Aspen Skiing*).
270 Weiser, *supra* note 263, at 18-19. Weiser also cautions courts to consider that a remedy based on a prior course of dealing “levies a tax on a firm’s prior willingness to deal (by punishing its subsequent change) and thus may deter valuable experimentation in future business strategies.” *Id.* at 19.
271 *Id.* at 15.
272 410 U.S. 366, 375 (1973) (affirming a district court decree requiring the defendant to supply services “at rates which are compensatory and under terms and conditions which are filed with and subject to approval by the Federal Power Commission”). In *Otter Tail*, the regulatory agency did not have the explicit statutory authorization to mandate the antitrust remedy itself. *Id.* at 375-76. However, the commission did have the capability to supervise and enforce such a remedy. *Id.*
274 *Id.* at 15.
275 *Id.* at 20.
price charged by the former to the latter. A judicial remedy based on a nondiscriminatory standard would require the broadband provider to charge Internet application companies the same rate.

Thus, in the context of broadband services and Internet applications (and the new economy generally), antitrust courts can effectively counteract anticompetitive actions through a variety of remedial options.

CONCLUSION

Broadband providers compete directly with some Internet applications. Based on competition on the merits—for example, brand power and bundled offerings—broadband providers often drive many independent application providers from the market. However, the proposed pay-to-play system is unreasonably tilting the competitive Internet application landscape toward broadband providers’ control.

By imposing a passage fee on any time-sensitive application to ensure priority delivery, broadband providers would violate NN principles as well as the antitrust law. NN principles seek to create a structural bias favoring entry of any player into the market for Internet applications. A pay-to-play system would impose significant barriers to entry for Internet application companies that provide a time-sensitive product. Thus, such a system would create a disincentive to innovate on the most dynamic portion of the network: the “ends.”

Under Supreme Court precedent established in *Aspen Skiing* and in *Kodak*, the pay-to-play system is effectively a refusal to deal with rivals. A monopolist’s action of closing a previously open platform without a legitimate business justification may be grounds for antitrust liability. Two of the three proffered justifications for the pay-to-play policy—the prevention of free riding and a lack of economic incentive to exclude—are not “legitimate” under case law and economic theory. The third justification offered—ensuring quality service—though arguably pretextual, might constitute a business justification.

276 A transfer price is the price at which one division of the company sells its product or service to another division of the company. See W. BRUCE ALLEN ET AL., MANAGERIAL ECONOMICS: THEORY, APPLICATIONS, AND CASES 516 (6th ed. 2005) (describing the meaning and importance of transfer pricing).

277 An accountant can easily calculate the internal cost under the auspices of the Generally Accepted Accounting Principles (GAAP).

278 See Weiser, *supra* note 263, at 20 (“In practice, this often means identifying preferred customers—or internal division of its own operations—and ensuring that the would-be-discriminated against party obtains the same treatment.”).
Nonetheless, under a rule-of-reason analysis that balances procompetitive benefits with anticompetitive harms, the pay-to-play system fails to withstand antitrust scrutiny. The same benefits could be attained in a manner that is less restrictive and harmful to competition.

In the next decade, consumers likely will witness greater competition in the provision of broadband services. The FCC has presently taken a “lighter regulatory touch” in order to spur a market entry of satellite, WiFi, 3G or 4G, and power line broadband to break up the cable/DSL broadband duopoly. In a marketplace that offers this degree of consumer flexibility, a pay-to-play system would not be an effective anticompetitive device.

However, the industry has not yet reached this competitive ideal. DSL providers have signaled their desire to use their market power in the last mile to extinguish their smaller VoIP rivals. Cable broadband providers have the same incentives to crush an Internet application that delivers video programming. In this period between deregulation and the competitive ideal, it is important to have a case-by-case approach to address anticompetitive actions. Articulating an antitrust framework for liability is crucial to maintaining innovation in the near future.

Farrell and Weiser recommend that the FCC take an “antitrust-like” approach to regulation in order to avoid vertical competitive harms before they occur. Although this approach has significant merit and could successfully implement the principles articulated in this Comment, the FCC currently has taken a “lighter-touch” approach. Thus, in the absence of effective regulation, a clear articulation of potential antitrust liability for a pay-to-play system may deter such future conduct. It is critical to articulate such liability in the courts today.

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280 Farrell & Weiser, supra note 181, at 133.