Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Preserving the Open Internet	)	GN Docket No. 09-191
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

COMMENTS OF TIME WARNER CABLE INC.

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SUMMARY

Time Warner Cable Inc. ("TWC") welcomes the Commission's commitment to seeking fact-based answers in determining whether to adopt rules purporting to support Internet openness. TWC also commends the Commission for its stated intention to preserve incentives for broadband Internet access service providers to invest and innovate, as there is widespread consensus that such contributions are vital to the nation's competitiveness and well-being. Yet the fact remains that there are no genuine problems that merit regulatory intervention at this time. The best way to promote the Commission's goals is to adhere to the policy of vigilant restraint that has served all stakeholders quite well thus far.

Far from correcting any problems in the marketplace, the rules proposed by the NPRM threaten to undermine the Commission's own objectives. Indeed, the NPRM acknowledges that much of the conduct it proposes to proscribe could *benefit* consumers. By proposing new restrictions and mandates without a demonstrable problem to solve, the NPRM threatens to distort competition, chill investment and innovation, and impede broadband service providers' ability to optimize network performance. The proposed rules also present significant statutory and constitutional concerns.

In light of these policy and legal shortcomings, the Commission should proceed with great caution, even if it declines to abandon its proposed new course altogether. In particular, if the Commission ultimately decides to adopt rules, in spite of the compelling reasons to refrain from doing so, TWC recommends key changes that at least would move the Commission closer to the balanced framework the NPRM describes as its ultimate goal. Specifically, the Commission should:

(1) Affirm the importance of affording broadband Internet access service providers sufficient flexibility to continue experimenting with different business models and practices. The NPRM appropriately acknowledges that such providers "*must be* able to . . . experiment with new technologies and business models in ways that benefit consumers." NPRM ¶ 103 (emphasis added). The proposed rules, however, would undercut this vital principle in several respects. The Commission should ensure that any rules it adopts preserve and protect service providers' ability to remain nimble in the constantly evolving broadband marketplace, prohibiting no more conduct than it finds necessary based on substantial evidence to address any actual threat to competition or consumers.

(2) Consistent with this need to maintain service providers' flexibility to pursue pro-competitive and pro-consumer initiatives, replace the proposed "nondiscrimination" requirement with a prohibition against "*unreasonable* discrimination." A strict "nondiscrimination" requirement—which would subject information service providers to a standard far more stringent than the traditional common carrier requirements that apply under Title II—would be unlawful and would foreclose a range of beneficial practices that the NPRM seeks to preserve.

(3) Maintain broadband Internet access service providers' flexibility to engage in "reasonable network management" and establish safe harbors that enable such providers to implement management techniques with a clear understanding of what is permitted and what is prohibited. The NPRM appropriately recognizes the need for broadband Internet access service providers to employ management

tools in the interest of addressing network congestion and, more broadly, optimizing performance. But that goal will not be realized unless the definition of "reasonable network management" more concretely specifies categories of techniques that will be deemed permissible.

(4) Apply any new rules evenhandedly to all participants in the Internet ecosystem that pose a potential threat to "openness"—including application and service providers—rather than arbitrarily limiting their application to broadband Internet access service providers. The Commission's *Internet Policy Statement* properly encompasses all such entities, and there is no legitimate justification for abandoning that approach. If the Commission determines that regulatory intervention is necessary to preserve an open Internet, it would make no sense to focus exclusively on providers of so-called "last mile" access facilities. Singling out broadband Internet access service providers is untenable in light of the increasingly seamless nature of the relevant infrastructure and the fact that companies like Google own and operate extensive network facilities and engage in various practices that could pose a more significant threat to "openness."

(5) Promote transparency and effective disclosure of information to consumers by all companies operating in the broadband arena. As long as consumers receive meaningful information about the practices of service, application, and content providers, that will achieve the Commission's goal of ensuring that network management tools are adequately explained to "upstream" entities.

and

(6) Fence off managed IP services from regulation. While TWC believes that the case for regulating access to the "public" Internet has not been made, there is plainly no basis to suggest that the emerging class of managed IP services should be subject to regulation. Such services are wholly distinct from the public Internet and thus do not implicate the concerns underlying the NPRM. Any attempt to impose "nondiscrimination" or other regulatory requirements on managed services would pose a severe and needless threat to the viability of such offerings and would jeopardize the substantial public benefits they entail.

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Time Warner Cable Inc. ("TWC") hereby submits its comments on the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned dockets.[1]

INTRODUCTION

TWC welcomes the Commission's commitment to seeking "fact-based answers" in determining whether to adopt rules purporting to support Internet openness.[2] TWC also commends the Commission for its stated intention to preserve incentives for broadband Internet access service providers to invest and innovate,[3] as there is widespread consensus that such contributions are vital to the nation's competitiveness and well-being. Yet the fact remains that there are no genuine problems that merit regulatory intervention at this time. The best way to promote the Commission's goals—including furthering broadband deployment and adoption, nurturing the ongoing development of the Internet, and maximizing consumer welfare—is to monitor the marketplace and defer adoption of any mandates unless there is a demonstrated

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1 *Preserving the Open Internet; Broadband Industry Practices*, Notice of Proposed Rulemaking, GN Docket No. 09-191, WC Docket No. 07-52 (rel. Oct. 22, 2009) ("NPRM").

2 *Id.* ¶ 16.

3 *See, e.g., id.* ¶ 9.

problem. This policy of vigilant restraint has served the Commission, consumers, and industry participants quite well thus far, and it will continue to do so.[4]

Far from correcting any problems in the marketplace, the rules proposed by the NPRM threaten to undermine the Commission's own objectives. Indeed, the NPRM acknowledges that much of the conduct it proposes to proscribe could *benefit* consumers. By proposing new restrictions and mandates without a demonstrable problem to solve, the NPRM threatens to distort competition, chill investment and innovation, and impede broadband service providers' ability to optimize network performance. The proposed rules also present significant statutory and constitutional concerns.

In light of these policy and legal shortcomings, the Commission should proceed with great caution, even if it declines to abandon its proposed new course altogether. In particular, if the Commission ultimately decides to adopt rules, in spite of the compelling reasons to refrain from doing so, TWC recommends key changes that at least would move the Commission closer to the balanced framework the NPRM describes as its ultimate goal. Specifically, the Commission should:

(1) Affirm the importance of affording broadband Internet access service providers sufficient flexibility to continue experimenting with different business models and practices. The NPRM appropriately acknowledges that such providers "*must be* able to . . . experiment with new technologies and business models in ways that benefit consumers."[5] The proposed rules, however, would undercut

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4 *See* News Release, *FCC Chairman Kennard Shares Goal of Local Governments to Achieve Open Broadband Access; Continues to Believe that Vigilant Restraint is the Right Way to Get There,* Aug. 11, 1999 (describing the policy of "vigilant restraint").

5 NPRM ¶ 103 (emphasis added).

this vital principle in several respects. The Commission should ensure that any rules it adopts preserve and protect service providers' ability to remain nimble in the constantly evolving broadband marketplace, prohibiting no more conduct than it finds necessary based on substantial evidence to address any actual threat to competition or consumers.

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(3) Maintain broadband Internet access service providers' flexibility to engage in "reasonable network management" and establish safe harbors that enable such providers to implement management techniques with a clear understanding of what is permitted and what is prohibited. The NPRM appropriately recognizes the need for broadband Internet access service providers to employ management tools in the interest of addressing network congestion and, more broadly, optimizing performance. But that goal will not be realized unless the definition of "reasonable network management" more concretely specifies categories of techniques that will be deemed permissible.

(4) Apply any new rules evenhandedly to all participants in the Internet ecosystem that pose a potential threat to "openness"—including application and service providers—rather than arbitrarily limiting their application to broadband Internet access service providers. The Commission's *Internet Policy Statement* properly encompasses all such entities, and there is no legitimate justification for abandoning that approach.[6] If the Commission determines that regulatory intervention is necessary to preserve an open Internet, it would make no sense to focus exclusively on providers of so-called "last mile" access facilities. Singling out broadband Internet access service providers is untenable in light of the increasingly seamless nature of the relevant infrastructure and the fact that companies like Google own and operate extensive network facilities and engage in various practices that could pose a more significant threat to "openness."

(5) Promote transparency and effective disclosure of information to consumers by all companies operating in the broadband arena. As long as consumers receive meaningful information about the practices of service, application, and content providers, that will achieve the Commission's goal of ensuring that network management tools are adequately explained to "upstream" entities.

and

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6 *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14986 ¶ 4 (2005) ("*Internet Policy Statement*").

(6) Fence off managed IP services from regulation. While TWC believes that the case for regulating access to the "public" Internet has not been made, there is plainly no basis to suggest that the emerging class of managed IP services should be subject to regulation. Such services are wholly distinct from the public Internet and thus do not implicate the concerns underlying the NPRM. Any attempt to impose "nondiscrimination" or other regulatory requirements on managed services would pose a severe and needless threat to the viability of such offerings and would jeopardize the substantial public benefits they entail.

BACKGROUND

The many issues raised by the NPRM must be considered against the backdrop of dynamic competitive and technological developments relating to the past, present, and future of the Internet. The NPRM acknowledges some aspects of this background, but its recitation is incomplete—and the missing parts are critical, as their absence compromises the factual predicate for the proposed rules and renders them deficient in important respects. Any "fact-based" discussion of how to ensure an open Internet must include a thorough consideration of how that openness came about in the first place, which entities have the potential to threaten it, and whether any of them have actually done so. TWC seeks to fill the relevant gaps in the NPRM's discussion below.

1. The Successful Roll-Out of Broadband Networks and Services

The rapid deployment of broadband network facilities to more than 90 percent of American consumers has been a remarkable success story. Yet the debate over net neutrality generally proceeds from the premise that some ill-defined market failure warrants government intervention. In fact, the private sector has fueled the proliferation of broadband services in urban and rural areas alike, in a manner that meets the evolving needs and expectations of

consumers. To be sure, there is more work to be done—and TWC and others have offered various proposals to expand broadband availability and to boost adoption[7]—but the strides that have been made in less than two decades are extraordinary.

TWC's experience is illustrative of this success. TWC, the nation's second-largest cable operator, provides one or more services to approximately 14.7 million customers in 28 different states over its technologically advanced broadband networks passing nearly 27 million homes. In addition to offering basic and digital cable services, TWC is a leading provider of broadband Internet access and facilities-based VoIP services to customers across its footprint. TWC has long been an innovator in the broadband arena, establishing a remarkably successful track record in the provision of broadband-based services to residential and enterprise customers for over a decade. TWC is now one of the country's largest providers of broadband Internet access, with nearly 9 million subscribers.

Driven by the vigorous and growing competition that it faces with respect to all of its services, TWC has long been committed to providing broadband services that fit a variety of customer needs and budgets. Indeed, a core aspect of TWC's corporate mission is to empower customers by giving them choice and control over their communications experience, and TWC's broadband services are the purest manifestation of that vision. TWC's broadband subscribers can access any application, service, or content of their choosing and can select from among four and sometimes more service tiers offering a wide range of maximum download and upload

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7 *See generally, e.g.*, Comments of Time Warner Cable Inc., GN Docket No. 09-51, at 3-4 (filed June 8, 2009) ("TWC National Broadband Plan Comments"); Reply Comments of Time Warner Cable Inc., GN Docket No. 09-51 (filed July 21, 2009) ("TWC National Broadband Plan Reply Comments").

speeds.[8] And TWC continually strives to improve the quality and quantity of these options. For example, since 1996 when it first introduced its high-speed Internet access service, called "Road Runner," TWC has increased the maximum download speed of its Standard tier *tenfold*.[9] Meanwhile, since 2001, TWC has reduced the price of its entry-level service tier by approximately 45 percent.[10] TWC has been able to offer these market-leading broadband capabilities by investing billions of dollars of private capital.[11]

In addition to expanding the range of service options, TWC ensures that its customers are educated about them by providing information at every stage of the relationship—from the selection of plans and features to customer care and billing to termination.[12] With respect to its high-speed data services, TWC does so through a variety of channels, including by posting materials on its website describing the technical capabilities of each of its service tiers (maximum download and upload speeds, as measured in megabits per second) and the types of applications that each tier is best suited to support.[13] Of particular relevance to this proceeding, TWC provides consumers with detailed information about the limitations imposed by its

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8 TWC has provided the Commission with detailed data concerning the speeds, tiers, and prices of its broadband services. *See* Letter from Matthew A. Brill, Counsel to Time Warner Cable Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 09-51, at 1-5 & tables 2, 3 (filed Oct. 29, 2009) ("TWC Broadband Ex Parte").

9 *Id.* at 2.

10 *Id.* at 3-4.

11 TWC National Broadband Plan Comments at 3 (noting that since 1996, TWC has expended more than $25 billion of capital in its business).

12 TWC has described its disclosure practices at length in other dockets focused on transparency. *See* Comments of Time Warner Cable Inc., *Consumer Information and Disclosure*, CG Docket No. 98-158 *et al.*, at 5-13 (filed Oct. 13, 2009) ("TWC Consumer Disclosure Comments").

13 *Id.* at 8-9.

"acceptable use" and "network management" policies, allowing them to make informed decisions about whether to subscribe to TWC's services.[14]

TWC's efforts exemplify the private investment that has flourished in an environment of minimal regulation and is properly recognized as the primary engine for broadband proliferation in this country.[15] The extent and results of that investment have been well documented in other Commission proceedings, but their relevance to the matters presented by the NPRM warrants a brief summary here.[16] The U.S. Chamber of Commerce has noted that the communications industry invested over $60 billion on broadband infrastructure in 2008 alone,[17] and an independent study requested by the Commission forecasts the same for 2009, despite the deep recession that froze capital investment in most sectors.[18] The cable industry's efforts are especially noteworthy, as its massive investments in broadband network facilities—more than

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14 *See* Reply Comments of Time Warner Cable Inc., WC Docket No. 07-52, at 13-17 (filed Feb. 28, 2008) ("TWC Net Neutrality Reply Comments"); *see also infra* p. 98.

15 *See* U.S. Gov't Accountability Office, Report to the Chairman, Committee on Energy and Commerce, House of Representatives: Broadband Deployment Plan Should Include Performance Goals and Measures to Guide Federal Investment 22 (2009) ("GAO Report") (stating that "some type of broadband infrastructure has been deployed to approximately 90 percent of U.S. households" because of "extensive private-sector investment and minimal government intervention").

16 *See, e.g.*, TWC National Broadband Plan Reply Comments at 6-10 (summarizing independent data and comments filed in the National Broadband Plan proceeding concerning the extent of broadband investment in the United States).

17 Comments of the U.S. Chamber of Commerce, GC Docket No. 09-51, at 2 (filed June 8, 2009).

18 Robert C. Atkinson & Ivy E. Schultz, *Broadband in America: Where It Is and Where It is Going (According to Broadband Service Providers)*, Columbia Institute for Tele-Information, at 11 (Nov. 11, 2009) ("CITI Draft Broadband Study").

$145 billion since 1996—have allowed it to deliver a range of new and improved broadband services to consumers.[19]

Such efforts have facilitated the rapid shift from a narrowband world to a broadband one. The NPRM notes that in the span of just a few years, the number of online users relying on dial-up access decreased from about 50 percent to 10 percent.[20] Leading the way were cable operators such as TWC, which offered high-speed Internet access as an alternative to dial-up long before telephone companies even offered DSL to end users.[21] The decline of dial-up Internet access that has accompanied the rise of broadband is most vividly illustrated by the fact that the NPRM does not even propose to subject such services to openness requirements.[22]

As a result, broadband Internet access capability is now almost ubiquitously available over a diverse array of platforms, and consumers can switch among them in search of the best options for their needs.[23] By 2007, cable broadband was available to an estimated 96 percent of

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19 *See, e.g.*, TWC National Broadband Plan Comments at 9-10 (describing investment by the cable industry and Commission acknowledgement of those efforts).

20 NPRM ¶ 48; *see also* Remarks of Commissioner Robert M. McDowell, Catholic University School of Law Symposium; *Broadband Deployment in a Multi-Media World: Moving Beyond the Myths to Seize the Opportunities* (Mar. 15, 2007) (stating that, relative to other technologies, "broadband has had the fastest penetration rate of any technology in history," faster than that of "electricity, radios, TVs, VCRs, DVD players, PCs and every other technology in American history").

21 Comments of the National Cable & Telecommunications Association, GN Docket No. 07-45, at 2-3 (filed May 16, 2007); TWC National Broadband Plan Comments at 3-4 (noting that with its Road Runner offering, TWC was one of the first service providers to launch a broadband Internet access service).

22 *See* NPRM ¶ 91. Given the shift from dial-up to broadband Internet access, the Commission should also be wary of giving too much weight to the technological choices made in connection with dial-up services. Those choices may have been appropriate for a narrowband environment, but they are not necessarily relevant to the vastly different uses that prevail in today's broadband environment.

23 *See, e.g., National Broadband Plan NOI* ¶ 2 (observing that "the majority of U.S. businesses and households have broadband connections, and access to the Internet

homes passed, and broadband via DSL was available to an estimated 82 percent.[24] Similarly, by that time, wireless broadband networks had been deployed in areas of the country containing 233 million people, or 82 percent of the U.S. population.[25] As of June 2008, the number of high-speed lines in the United States had reached 132.8 million, up from 100.9 million just a year earlier.[26] Although the Commission has suggested that some of its prior findings in this regard may have rested on incomplete or inadequate data,[27] other sources corroborate the widespread availability of broadband services and the vigorous competition among them.[28] And all of this was achieved in an environment largely free of regulation.

Competition across these various broadband platforms—including, in particular, cable and telco networks—has delivered significant consumer benefits. The Federal Trade Commission ("FTC"), for example, has determined that broadband competition has led to

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through a variety of technologies—fiber, copper, cable, wireless, and satellite—is an integral and critical part of American life") (citation and footnote omitted); *Rural Broadband Report* ¶ 10 (describing new broadband technologies being utilized by a range of platform providers).

24 *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996,* Fifth Report, 23 FCC Rcd 9615 ¶ 69 n.206, App. B, table 14 (2008) ("*Fifth 706 Report*").

25 *Id.* ¶ 21.

26 *High-Speed Services for Internet Access: Status as of June 30, 2008*, Industry Analysis and Technology Division, Wireline Competition Bureau, July 2009, Table 1.

27 Notice of Inquiry, GN Docket Nos. 09-137, 09-51, at ¶ 1 (rel. Aug. 7, 2009).

28 *See, e.g.*, Comments of Time Warner Cable Inc., GN Docket Nos. 09-137, 09-51, at 9 n.28 (filed Sept. 4, 2009) ("TWC Section 706 Comments") (citing independent findings of extensive broadband competition); CITI Draft Broadband Study at 7 (stating that cable operators offer broadband service to 92 percent of the country and that by 2013-14, broadband service providers expect to serve about 95 percent of U.S. homes with broadband while increasing the speeds they can offer).

"declining prices for higher-quality service."[29] The Department of Justice likewise recognized the benefits of broadband competition in a recent Commission filing, stating that "the market is shifting generally in the direction of faster speeds and additional mobility."[30] Likewise, one independent study reports that "the data on broadband competition show a vibrant, expanding competitive industry" in which consumer choice is increasing and prices continue to decline.[31]

As prices have fallen, consumers have experienced remarkable increases in speed: the record in the National Broadband Plan proceeding, for example, reflects that as of 2007, consumers could experience 10 to 20 times more maximum speed than they could have received at the same price in 2000.[32] TWC's own experience corroborates that trend—as noted, the entry-level price for TWC's own broadband Internet access service has steadily declined while speed has increased. More generally, the NPRM itself is replete with examples of the consumer benefits now available, all of which has been accomplished under a framework of minimal regulation that the NPRM now proposes to change.[33]

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29 Federal Trade Commission Internet Task Force, *Staff Report: Broadband Connectivity Competition Policy*, at 100 (June 2007) ("FTC Report"); *see also* Scott Wallsten, *Understanding International Broadband Comparisons*, Technology Policy Institute 24 (June 2009) (finding that since 2001, prices for broadband services have fallen substantially).

30 Ex Parte Submission of the United States Department of Justice, *Economic Issues in Broadband Competition*, GN Docket No. 09-51, at 6 (filed Jan. 4, 2010) ("DOJ Comments on NBP Economic Issues").

31 Stephen B. Pociask, *The American Consumer Institute, Net Neutrality and the Effects on Consumers*, at 10 (2007).

32 *See* Comments of U.S. Telecom, GN Docket No. 09-51, at 6 (filed June 8, 2009).

33 *See, e.g.*, NPRM ¶ 48 ("Broadband Internet access has become a vital resource for, among other things, commerce, civic engagement, communications and telecommuting options for people with disabilities, health care, and education."); *id.* ¶ 22 (citing examples of how the Internet has "transform[ed] our health care, education, and energy usage," including creating a forum for searching for health information online, providing students the ability to access specialized teachers and materials online that would

2. The Ongoing Growth and Evolution of the Internet

Broadband is not just expanding in terms of its reach, it is evolving in terms of what it allows users to do. In 2005, the Commission anticipated that "[c]ontinuous change and development are likely to be the hallmark of the marketplace for broadband Internet access . . . over the next several years."[34] That prediction, which is reiterated in the NPRM,[35] unquestionably has been fulfilled, as the Internet is in the midst of a dramatic and ongoing transformation that offers great promise but also poses substantial challenges for broadband network owners.

The growth of the Internet has been explosive. As the NPRM recognizes, "the volume of Internet traffic is increasing rapidly."[36] That trend inevitably follows from increased broadband adoption. Although there is now a widespread consensus that the Commission can and should do more to promote adoption, it remains the case that more and more Americans are taking advantage of the broadband options now available to them. The NPRM notes that "broadband

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otherwise be unreachable, and the advent of innovative car sharing companies that take cars off the road and decrease gasoline usage); *id.* ¶ 23 (stating the many ways in which the Internet has provided a "platform for speech, democratic engagement, and cultural development" that allows "individual Internet users [to] influence the course of world events"); *id.* ¶ 108 (noting some of the many services provided to end users over broadband Internet access service providers' facilities that constitute managed or specialized services, such as IP-enabled "cable television" delivery, facilities-based VoIP services, and specialized telemedicine applications); *id.* ¶ 150 (citing to the Commission's earlier discussion of possible future offerings from broadband Internet access service providers, such as specialized telemedicine, smart grid, and eLearning applications); *id.* ¶ 155 (noting the "unleashing [of] tremendous innovation and investment" that has followed from the flourishing of alternative platforms for accessing the Internet).

34 *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 ¶ 56 (2005) ("*Wireline Broadband Order*") (subsequent history omitted).

35 NPRM ¶ 12 ("[W]e recognize that Internet and computer technologies, as well as associated market structures, are in constant flux.").

36 *Id.* ¶ 8.

Internet access service adoption has increased dramatically, with broadband in approximately thirty percent of American households in 2005 and sixty-three percent today."[37] While in 1993 there were 2 million host computers connected to the Internet, by January 2008 that number had increased to 541.7 million.[38] Netcraft has estimated that the number of websites has grown from approximately 18,000 in mid-1995 to over 155 million as of the end of 2007 and to over 233 million as of the end of 2009.[39] As of December 2009, the number of estimated Internet users exceeded 1.7 billion, with nearly 247 million users in North America alone.[40] The global online population has grown more than 20 percent in the last year.[41] According to a recently released study, September 2009 was a record month for Internet usage, with nearly 27 billion hours spent on the Internet globally by an online population of 1.2 billion Internet users age 15 and older.[42] These trends can only be expected to increase, particularly as the Commission increases its focus on broadband adoption through the National Broadband Plan.

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37 *Id.*¶ 48 (citing a study by the Pew Internet and American Life Project); *see also* Pew Internet and American Life Project, *Internet, broadband, and cell phone statistics*, Jan. 5, 2010, http://www.pewinternet.org/~/media//Files/Reports/2010/PIP_December09_update.pdf (citing December 2009 survey results showing about the same level of broadband penetration).

38 GRANT ESKELSEN ET AL., THE PROGRESS & FREEDOM FOUNDATION, THE DIGITAL ECONOMY FACT BOOK 2 (10th ed. 2009) ("DIGITAL ECONOMY FACT BOOK"); *see also id.* (defining a "host computer" as "a networked computer that provides information, such as web pages, to users").

39 *See* Netcraft December 2007 Web Server Survey, *at* http://news.netcraft.com/archives/2007/12/29/december_2007_web_server_survey.html (Dec. 2007); Netcraft November 2009 Web Server Survey, *at* http://news.netcraft.com/archives/2009/11/10/november_2009_web_server_survey.html.

40 Internet World Stats, *Internet Usage Statistics*, http://internetworldstats.com/stats2.htm.

41 Gavin O'Malley, *ComScore: Microsoft Most Engaging*, MEDIAPOST NEWS, Nov. 8, 2009, http://www.mediapost.com/publications/?fa=Articles.printFriendly&art_aid=116993.

42 comScore, "Microsoft Sites Captures Largest Share of Time Spent Online Worldwide." comScore, Nov. 6, 2009, http://www.comscore.com/Press_Events/Press_Releases/2009/11/Microsoft_Sites_Captures_Largest_Share_of_Time_Spent_Online_Worldwide.

While the increasing volume of Internet traffic is a critical fact, an even more salient issue for present purposes concerns the types of uses and applications that are driving it. In contrast to the simple web surfing, email communications, and other traditional applications that prevailed a decade ago, bandwidth-intensive and latency-sensitive applications are increasingly predominant. A particularly significant development has been the rise of video-streaming. As the NPRM acknowledges, online video viewership is growing rapidly.[43] One report found that Internet video increased from 12 percent of global consumer Internet traffic in 2006 to 22 percent in 2007,[44] and is forecast to account for over 60 percent of all consumer Internet traffic by 2013.[45] According to Nielsen, the time spent viewing online video by overall Internet audience grew by about 25 percent over the last year as of September 2009.[46] In August 2009, more than 25 billion videos were viewed online in the United States, with 81.6 percent of the total U.S. Internet audience viewing online videos.[47] YouTube, which did not even exist until 2005, was estimated in early 2008 to send 1,000 gigabytes of data a second, and 300 billion

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43 NPRM ¶ 48 ("Today nearly a fifth of online adults access Internet video on a daily basis, compared with eight percent in 2006.") (citation omitted).

44 DIGITAL ECONOMY FACT BOOK at 88 (*citing* Cisco Visual Networking Index, "Cisco Visual Networking Index Projects Global IP Traffic to Reach Over Half a Zettabyte in Next Four Years," Cisco, June 16, 2008, http://newsroom.cisco.com/dlls/2008/prod_061608b.html?print=true).

45 *Cisco Visual Networking Index: Forecast and Methodology, 2008-2013*, June 9, 2009, at 2 ("Cisco Visual Networking Forecast"), *available at* http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html.

46 Nielsen Announces September U.S. Online Video Usage Data, Oct. 12, 2009, http://en-us.nielsen.com/main/news/news_releases/2009/october/nielsen_announces.

47 comScore, "Google Sites Surpasses 10 Billion Video Views in August," Sept. 28, 2009, http://www.comscore.com/Press_Events/Press_Releases/2009/9/Google_Sites_Surpasses_10_Billion_Video_Views_in_August.

gigabytes a month.[48] These trends will likely be magnified by the emergence of ambient video—that is, persistent video streams such as nannycams, petcams, and home security cams—which is projected to account for 8 percent of consumer Internet traffic by 2013.[49]

The surge in online video traffic compounds the continuing increase in traffic from peer-to-peer ("P2P") applications. As the Commission is well aware, P2P applications have been a key driver of the massive growth of Internet traffic in recent years.[50] P2P applications were estimated to represent 60 percent of all Internet traffic at the end of 2004.[51] According to one report, on the heels of exponential growth over the last five years, P2P will increase at a compound annual growth rate ("CAGR") of 18 percent from 2008 to 2013.[52] P2P traffic is expected to comprise 20 percent of consumer Internet traffic by 2013; though this would be a decrease from 50 percent at the end of 2008, that is merely a testament to the even greater rates of growth experienced by streaming video and other bandwidth-intensive traffic, including VoIP and video gaming.[53]

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48 Yi-Wyn Yen, *YouTube Looks for the Money Clip*, CNN.com, Mar. 25, 2008, http://techland.blogs.fortune.cnn.com/2008/03/25/youtube-looks-for-the-money-clip/; *see also Luncheon Address of Commissioner Robert M. McDowell*, Broadband Policy Summit III, June 7, 2007, *at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-273742A1.doc (noting in 2007 that YouTube alone used as much bandwidth as the entire Internet did in 2000).

49 Cisco Visual Networking Forecast at 2, 6.

50 TWC and others have described the growth of P2P at length at prior stages of this proceeding. *See, e.g.*, Comments of Time Warner Cable Inc., WC Docket No. 07-52, at 9-11 (filed Feb. 13, 2008) ("TWC Net Neutrality Comments").

51 CHARLES B. GOLDFARB, ACCESS TO BROADBAND NETWORKS: CONGRESSIONAL RESEARCH SERVICE REPORT TO CONGRESS 3 (2006), *available at* http://www.ipmall.info/hosted_resources/crs/RL33496_060629.pdf.

52 Cisco Visual Networking Forecast at 1-2.

53 *Id.* at 1-2.

These developments underscore the dynamic and rich quality of the Internet, but also pose enormous challenges for network owners.[54] First, such latency-sensitive applications pose transmission challenges that did not pertain to email and web surfing that preceded them. The "end-to-end principle" upon which the Internet has developed requires that all data packets of Internet traffic, regardless of application type, source, or content, be routed on a first-come, first-served—or "best efforts"—basis. In contrast to the simple web surfing, email communications, and other traditional applications that prevailed a decade ago, latency-sensitive applications like streaming video, and VoIP do not function as well unless the packets arrive in sufficient proximity.[55]

Such applications are also bandwidth-intensive. TWC has explained to the Commission that in light of these increases in traffic, usage has increased at a CAGR of 40 percent since 2003, and that rate appears to be accelerating with the increased prevalence of Internet video.[56] Bandwidth utilization is not only growing dramatically, but it is also increasingly stratified. The top five percent of TWC broadband subscribers account for 43 percent of overall consumption.[57] Moreover, the top quartile of subscribers is responsible for 79 percent of total bandwidth

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54 The NPRM barely acknowledges these challenges, and underestimates them when it does. *See* NPRM ¶ 57 ("With the rapid growth of broadband applications and content, especially video, access providers may face capacity constraints.").

55 As explained by the FTC, for example, real-time conversations can only occur through VoIP applications if the voice data packets are received by the end user within 50 milliseconds after they are spoken, whereas e-mail data packets, which are not time-sensitive, may be delayed seconds or even minutes without greatly reducing the utility of the e-mail application. *See* FTC Report at 85 n.385.

56 TWC Broadband Ex Parte at 6; *see also* Cisco Visual Networking Forecast at 1 (stating that global IP traffic will quintuple from 2008 to 2013, and grow at a CAGR of 40 percent).

57 TWC Broadband Ex Parte at 4.

utilization and consumes over 100 times more bandwidth than the bottom quartile.[58] Heavy bandwidth usage by a few subscribers can cause congestion and decrease transmission speed even for more basic applications, such as email and web browsing. As a result, a small proportion of users have the capability to degrade the Internet experience for the vast majority of the online population.

In response to these trends, TWC makes substantial and continual investments in network upgrades (splitting nodes, extending additional fiber, and undertaking other improvements), although such efforts do not offer a complete solution. As noted, TWC and other broadband Internet access service providers are expending billions of dollars in private capital on infrastructure, and it has been estimated that over $140 billion more will be needed to deploy next-generation broadband network infrastructure and facilities nationwide.[59] But increasing capacity is not sufficient to meet the heavy demands created by latency-sensitive and bandwidth-intensive applications. TWC has previously explained that P2P applications consume *all* available bandwidth, working around the congestion-reduction mechanism built into the Transmission Control Protocol/Internet Protocol ("TCP/IP").[60] And such applications continue to consume downstream and upstream bandwidth even after a download is complete.[61] Thus, any bandwidth that is added is quickly soaked up by such applications. Such challenges will be

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58 *Id.*; *see also* Christopher J. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1879 n.145 (2006) (stating that 5 percent of users consume as much as 60-70 percent of all available bandwidth).

59 *See* Robert E. Litan & Hal J. Singer, *Unintended Consequences of Net Neutrality Regulation*, 5 J. ON TELECOMM. & HIGH TECH. LAW 533 (2007); *see also* FCC September Commission Meeting Presentation, Sept. 29, 2009, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf (estimating a cost of $20-350 billion to make broadband universally available).

60 TWC Net Neutrality Comments at 12 (*quoting* FTC Report at 29).

61 *See id.* at 11-12.

compounded with the emergence of adaptive bitrate streaming technology, which makes multiple streams available from the same link and then switches content among them in response to changing conditions.[62] While such technologies may offer some benefits to consumers, they significantly up the ante for network owners by fueling never-ending increases in the cost and difficulty of protecting the online experience, thereby harming consumers' interests.

3. The Facts Regarding Internet Openness

Notwithstanding the challenges they pose for broadband Internet access network owners, the widespread availability and use of this new generation of applications demonstrate the point that is at the core of this proceeding: the Internet is open and accessible. The NPRM confirms this in a broad sense—indeed, its central goal of "preserving" Internet openness necessarily recognizes that such openness already exists. Consumers have to come to expect that they can access the content and services they want, when they want. Service providers almost invariably meet those expectations, and in those isolated instances when they have not, the marketplace has exerted the discipline necessary to rectify matters.[63] The FTC, following a thorough review of alleged threats to Internet openness, explained that it had not uncovered evidence "of any

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62 Jan Ozer, *Streaming Gets Smarter: Evaluating the Adaptive Stream Technologies*, STREAMING MEDIA, July 31, 2009, *available at* http://www.streamingmedia.com/article.asp?id=11290 (noting use of this technology by Adobe and Microsoft, among others); *see also* Akamai, *Akamai Unveils the Akamai HD Network*, Sept. 29, 2009, http://www.akamai.com/html/about/press/releases/2009/ press_092909.html (describing adaptive bitrate streaming as a "unique network and player streaming process that is designed to enable uninterrupted playback at HD bitrates that seamlessly adjusts to fluctuations in available bandwidth to provide the best quality possible to each user," and stating that "supporting this level of traffic requires a global network that can manage millions of simultaneous users streaming very high bitrate content").

63 *See, e.g.*, TWC Net Neutrality Comments at 7 (noting Verizon Wireless's immediate reversal of policy to block "controversial or unsavory" text messages in response to public criticism).

significant market failure or demonstrated consumer harm from conduct of broadband providers."[64]

Despite proposing to regulate the practices of broadband Internet access service providers as they relate to Internet openness, the NPRM effectively corroborates the FTC's conclusion, noting only two specific incidents in the last five years in which such providers may have acted inconsistently with the openness principles the NPRM espouses.[65] The first of these, involving Madison River's alleged blocking of ports used for VoIP applications, was swiftly resolved nearly five years ago.[66] In fact, following that incident, the Commission concluded that it did not constitute evidence sufficient to warrant the imposition of net neutrality mandates.[67] The second, involving Comcast and BitTorrent, focused on Comcast's network management practices and disclosure policies relating to its efforts to address particular burdens imposed by P2P traffic and was resolved by the parties nearly two years ago, even before the Commission intervened.[68] The NPRM also cites a study showing that the blocking of BitTorrent uploads alleged to have

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64 FTC Report at 160.

65 NPRM ¶¶ 32 (citing Madison River example), 37 (citing Comcast/BitTorrent example).

66 *Madison River Communications, LLC and affiliated companies*, Consent Decree, File No. EB-05-IH-0110, at ¶ 3 (Mar. 3, 2005) (noting issuance of letter of inquiry on February 11, 2005 and consent decree released three weeks later).

67 *See Wireline Broadband Order* ¶ 96 & n.287 (citing the Madison River example but nonetheless stating: "[W]e do not find sufficient evidence in the record before us that such interference [with consumer access to content, services, and applications] by facilities-based wireline broadband Internet access service providers or others is currently occurring. . . .").

68 *See Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* Memorandum Opinion and Order, 23 FCC Rcd 13028 (2008) ("*Comcast Network Management Practices Order*"), *pet. for rev. filed, Comcast Corp. v. FCC*, Case No. 08-1291 (D.C. Cir.).

occurred in early 2008 gradually tapered off and "was largely absent" by the beginning of 2009.[69] While the NPRM also refers to "concerns" about openness that arose in connection with several large telecommunications mergers, those concerns were never substantiated or realized—in fact, the one merger condition that the Commission adopted to address the issue (in the AT&T/BellSouth merger) sunset over a year ago, without any reported incidents while it was in effect or thereafter.[70] Thus, as discussed further below, the NPRM is left mainly to speculate about when and under what circumstances broadband Internet access service providers *might* engage in conduct inconsistent with principles of Internet openness, without finding that any of them are actually doing so or even are likely to do so.[71]

While the NPRM hypothesizes various harms by broadband Internet access service providers, it all but ignores potentially greater threats to openness posed by others within the same Internet ecosystem.[72] The NPRM attempts to justify this myopic focus by characterizing facilities-based providers of broadband Internet access service as "gatekeeper[s] to the content,

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69 NPRM ¶ 123 & n.240 (citations omitted).

70 *Id.* ¶¶ 33-34; *see also Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation, (and Subsidiaries, Debtors-In-Possession), Assignors, to Time Warner Cable Inc. (Subsidiaries), Assignees, Adelphia Communications Corporation, (and Subsidiaries, Debtors-In-Possession), Assignors and Transferors, to Comcast Corporation (Subsidiaries), Assignees and Transferees, Comcast Corporation, Transferor, to Time Warner Inc., Transferee, Time Warner Inc., Transferor, to Comcast Corporation, Transferee*, Memorandum Opinion and Order, 21 FCC Rcd 8203 ¶ 220 (2006) (stating that other than reports of blocking spam, "[t]here is . . . no record evidence indicating that Comcast or Time Warner has willfully blocked a web page or other Internet content, service, or application via its high speed Internet platforms. Commenters and petitioners do not offer evidence that Time Warner and Comcast are likely to discriminate against Internet content, services, or applications after the proposed transactions are complete.").

71 *See infra* Section I.A.

72 *See infra* Section I.C.

applications, and services offered on the Internet."[73] But other entities—including application providers, backbone providers, content owners, and content delivery networks ("CDNs")—can perform "gatekeeper" functions to the same or a greater extent than broadband Internet access service providers, and some engage in activities that would appear to be anathema to the spirit if not the terms of the NPRM's proposed rules, in addition to contradicting the Commission's *Internet Policy Statement*.[74]

Most notably, even though Google is a leading proponent of subjecting broadband Internet access service providers to neutrality mandates, its business practices flout the very principles it espouses for others. For example, one of the most consequential aspects of the NPRM is the assertion that charging content, application, or service providers a fee for "prioritization" would be inconsistent with Internet openness.[75] But Google's core search application relies on just such a "pay-for-priority" scheme, which effectively can result in users not finding or using certain sites.[76] In fact, Google has developed an entire business around shifting costs to other companies by charging them for such priority. The NPRM further questions whether broadband Internet access service providers should be allowed to "favor" certain parties by caching their content at their own facilities in a manner that allows it to be more quickly accessed by consumers.[77] But Google has proposed doing precisely that, requesting collocation of Google servers at these providers' system head-ends in order to "create

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73 NPRM ¶ 72.

74 *Internet Policy Statement* ¶ 4.

75 NPRM ¶ 69.

76 *See infra* p. 77.

77 NPRM ¶ 57.

a fast lane for [Google's] own content"[78]—and threatening to swamp their networks with high-bandwidth traffic if they fail to agree.[79] Similarly, CDNs have based their business model on the type of fast lanes that the NPRM suggests might be unlawful if offered by broadband Internet access service providers, charging entities for the privilege to have their content stored on the CDN's vast network of dispersed servers and delivered via private networks facilities to enable faster access.[80]

Other large companies appear equally intent on engaging in non-neutral practices, even as some of them continue to urge restrictions on comparable conduct insofar as it is undertaken by a broadband Internet access service provider. For example, the Commission notes that its proposed nondiscrimination principle would prohibit broadband Internet access service providers from "favoring or disfavoring lawful content."[81] Microsoft and News Corp., however, were recently reported to be discussing an agreement under which Microsoft would pay News Corp. to remove links to its news content from Google's search engine and display them exclusively on Microsoft's competitive search engine, Bing.[82] And Amazon's Kindle service provides broadband Internet access but only allows customers to view limited content (including

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78 Vishesh Kumar & Christopher Rhoads, *Google Wants Its Own Fast Track on the Web*, WALL ST. J., Dec. 15, 2008, at A1.

79 *See infra* p. 76.

80 *See infra* Section II.D.1.c.

81 NPRM ¶ 11.

82 *See* Tim Arango & Ashlee Vance, *News Corp. Weighs an Exclusive Alliance with Bing*, N.Y. TIMES, Nov. 24, 2009.

Amazon's own content)[83]—a classic example of the type of "walled garden" service that the NPRM appears to consider problematic.[84]

Such practices—discussed at greater length below[85]—are prevalent, yet the NPRM hardly acknowledges them. If the Commission concludes that the types of discrimination described above are reasonable, it must afford broadband Internet access service providers the same flexibility, as there is no principled reason to treat their conduct any differently or to find that it would harm end users. Indeed, the Internet is more seamless than ever before, belying any traditional notion of a distinct "last mile."[86] And large application providers such as Google operate extensive fiber networks, while many broadband ISPs offer content and applications, further blurring any bright-line distinctions the Commission might seek to draw. Conversely, if the Commission decides that prioritization and selectively favoring content are unreasonable practices when undertaken by broadband Internet access service providers, then the only way to obtain the "openness" the Commission seeks to achieve is to restrict providers of online applications, content, and services to a comparable degree. The NPRM's proposal to establish asymmetrical regulation—treating broadband Internet access service providers as the sole threat to openness, even though application providers like Google are actually engaging in the conduct the NPRM addresses—is untenable as a matter of policy and law.

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83 *See* Product Description for Kindle Wireless Reading Device, *available at* http://www.amazon.com/Kindle-Wireless-Reading-Device-Display/dp/B00154JDAI.

84 NPRM, Statement of Commissioner Michael J. Copps, at 1 ("The Internet must never be about powerful gatekeepers and walled gardens.").

85 *See infra* Section II.D.

86 *See infra* pp. 96-97.

DISCUSSION

Against this backdrop, the NPRM states a desire to achieve a balance between protecting consumers and avoiding undue restraints on broadband Internet access service providers, and it asks a number of thoughtful questions regarding how to achieve that outcome.[87] But at the same time, the NPRM appears to presume both that broadband Internet access service providers will engage in certain misconduct and that regulation is the only suitable response. Putting aside the inherent dangers in regulating based on such assumptions, neither is correct, as explained in Part I below. Nevertheless, if the Commission remains determined to adopt rules after reviewing the entire record in this proceeding, it should only do so consistent with the modifications TWC proposes in Part II below.

I. THE COSTS AND RISKS ASSOCIATED WITH THE PROPOSED RULES STRONGLY OUTWEIGH THEIR PURPORTED BENEFITS

Notwithstanding the stated interest in fact-based and data-driven analysis, the NPRM signals the Commission's intent to regulate despite the absence of a record demonstrating that rules are remotely necessary. In fact, the NPRM actually sets forth a more compelling case *against* regulation in this context than for it, failing to identify any concrete problems to be solved while noting the significant downside of proceeding in the absence of demonstrated harm. These considerations should be sufficient to give the Commission pause, but the consequences of its particular proposals counsel even greater caution. Indeed, the proposed rules would, without justification, single out one set of participants in the Internet ecosystem to be subjected to vague and burdensome restrictions, producing an outcome that is profoundly unwise as a matter of

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87 *See* NPRM ¶ 14 ("We seek to create a balanced framework that gives consumers and providers of Internet access, content, services, and applications the predictability and clarity they need going forward while retaining our ability to respond flexibly to new challenges."); *see also, e.g.*, *id.* ¶¶ 80, 103, 118.

policy and unsound as a matter of law. Far from yielding a presumption in favor of regulation, these considerations should lead the Commission to maintain its successful policy of vigilant restraint.

A. The NPRM Acknowledges the Uncertain Case for Regulating Internet Openness.

Conspicuously absent from the NPRM is any identification of existing concrete harms—as opposed to hypothetical concerns—that must be addressed through regulation. In fact, while the NPRM states that "some conduct *is occurring* in the marketplace" that "could call for additional action by the Commission,"[88] it then fails to support the assertion with any references to ongoing or even recent examples of allegedly abusive practices. Rather, as discussed above, the NPRM mentions only two incidents in the last five years[89]—the same two (and only) examples typically invoked in support of calls for regulation in this area, despite making for poor precedent in that regard.

Indeed, whether considered individually or jointly, Madison River's brief blocking of VoIP ports and Comcast's network management practices can hardly justify leaping to adopt sweeping regulation of an entire category of providers—particularly one that has not, unlike other entities, been shown to be engaging in the conduct in question.[90] The former incident was by all accounts unique; indeed, there is no realistic prospect of such blocking recurring in the competitive marketplace. The latter was largely about the adequacy of Comcast's disclosures; to the extent that its network management practices were at issue, they were intended to address a type of traffic—P2P—that imposes unique burdens on network owners *by design* and does not at

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88 *Id.* ¶ 50 (emphasis added).

89 *See supra* pp. 19-20.

90 *See supra* Section II.D (discussing Google's widespread and ongoing departures from the *Internet Policy Statement*, which are entirely ignored by the NPRM).

all resemble the applications typically used by consumers online.[91] Unrestricted P2P traffic also harms consumers, as it shifts costs to purchasers of broadband connectivity.[92] Thus, the Commission should not use the Comcast-BitTorrent dispute as a launching pad for further regulation in this proceeding. Instead, if anything, the Commission should revisit its prior handling of that matter and reconsider whether any flat ban on P2P mitigation techniques is even appropriate, and then retract any portion of the *Comcast Network Management Practices Order* that could be read to impose such a prohibition. Even if these two incidents could justify some degree of regulatory intervention, the proposed rules are immensely disproportionate to the task, as the sheer breadth of the proposed rules would sweep in a wide range of other conduct. The NPRM's failure to tailor its proposal even to the isolated examples it does identify renders it legally as well as factually suspect.

Implicitly acknowledging the paucity of real-world harms, the NPRM relies on a theoretical discussion of how broadband Internet access service providers *might* discriminate in

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91 *See supra* p. 20.

92 *See* T. KARAGIANNIS ET AL., SHOULD INTERNET SERVICE PROVIDERS FEAR PEER-ASSISTED CONTENT DISTRIBUTION 1, *available at* http://www.cs.ucr.edu/~tkarag/ (explaining that P2P software has "an adverse impact on ISPs' costs by shifting the associated capacity requirements from the content providers and [Content Distribution Networks] to the ISPs themselves"); Press Release, Zattoo, Quick-Start, Long-Play Internet Television Arrives with Zattoo P2P IPTV (May 24, 2006), *available at* https://zattoo.com/news (noting that Zattoo's product "shift[s] network and server costs to viewers with peer-to-peer technology"); *see also* TWC Net Neutrality Comments at 19 & n.51. The Commission recognized this cost-shifting effect in the *Comcast Network Management Practices Order*, in the course of its misguided jurisdictional analysis. There, the Commission speculated that Comcast's P2P-mitigation technique might force such traffic onto other providers' networks (such as DSL), which could in turn raise their costs and thus the rates they charge to their own customers. *Comcast Network Management Practices Order* ¶ 17. While the Commission failed to support that causal chain with actual evidence, it nevertheless demonstrated an appreciation for the costs that P2P traffic can create for consumers.

certain circumstances and harm consumers as a result. But that speculation is not only groundless as a factual matter, it also lacks any logical basis.

A critical gap in the Commission's selective proposal to regulate broadband Internet access service providers is the absence of any assertion that they possess *market power*—without which, it is unclear that even manifestly harmful discrimination would warrant regulatory intervention.[93] The NPRM does not even propose a process by which it could properly evaluate claims of market power before deciding whether to adopt rules. The NPRM recognizes that "market power" consists of the "ability profitably to maintain prices above competitive levels for a significant period of time," and states that "[s]ellers with market power also may lessen competition on dimensions other than price, such as product quality, service, or innovation."[94] As discussed above, the overwhelming evidence shows that prices are decreasing, while service quality and innovation are increasing—hardly evidence of market power. Indeed, any contrary assertion would contradict the consistent express findings by the Commission—seconded by the FTC and others—that the broadband marketplace is competitive.[95] And to the extent the NPRM

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93 *See, e.g., Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, Second Notice of Proposed Rule Making, 10 FCC Rcd 10666 ¶ 36 (1995) (recognizing that the presence or absence of market power is an important factor in determining whether the imposition of regulations would be in the public interest); *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, First Report and Order, 85 FCC 2d 1 (1980) ("Application of current regulatory procedures to non-dominant carriers imposes unnecessary and counterproductive regulatory constraints upon a marketplace that can satisfy consumer demand without government intervention.").

94 NPRM ¶ 70 n.161 (citing FEDERAL TRADE COMMISSION & U.S. DEPARTMENT OF JUSTICE, HORIZONTAL MERGER GUIDELINES 2 (1997)) (internal quotation marks omitted).

95 *See, e.g., Wireline Broadband Order* ¶ 62 (observing that "[v]igorous competition between different platform providers already exists in many areas and is spreading to additional areas"); *id.* ¶ 57 (anticipating that "intermodal and intramodal competition will continue to encourage cable and DSL providers to expand their service areas, and "the threat of competition from other forms of broadband Internet access, whether satellite,

proceeds from the premise that the Commission's past orders were overly optimistic about the state of broadband competition and its ability to protect consumers' interests, it does not propose any means of building a record to test that proposition. In fact, the NPRM undermines that case by documenting the many consumer benefits—including the broad availability of content, services, and applications—produced in the broadband marketplace in the absence of regulation.[96]

In light of such findings, the NPRM posits that "[e]ven where there is effective competition in the Internet access market, individual broadband Internet access service providers may charge inefficiently high prices to content, application, and service providers" as a means of extracting profits.[97] The NPRM suggests that they may do so because "it is unlikely that competitive forces are sufficient to eliminate the incentive to charge a fee, particularly where the imposition of such a fee will not cause the access provider to lose many customers."[98]

This compound speculation provides extremely shaky grounds for adopting regulatory mandates, particularly given what is at stake in this proceeding. The FTC has observed that "it is not possible, based on generalized data or predictions of future business arrangements, to conclude that the online content and applications market suffers or will suffer from

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fixed or mobile wireless, or a yet-to-be-realized alternative, will further stimulate deployment of broadband infrastructure, including more advanced infrastructure such as fiber to the home"); *supra* pp. 10-11 (describing conclusions by the FTC and Department of Justice regarding the extent of broadband competition).

96 *See supra* p. 11 and note 33.

97 NPRM ¶ 68.

98 *Id.* ¶ 69. Of course, this latter statement is just a roundabout way of suggesting—again, without basis—that broadband Internet access service providers possess market power. Indeed, only a provider with market power would be protected against the loss of customers in the way the NPRM suggests.

anticompetitive conduct."[99] It has further warned about "the inherent difficulty in regulating based on concerns about conduct that has not occurred, especially in a dynamic marketplace."[100] The challenge arises largely from the fact that even if certain businesses possess the sort of anti-competitive incentives that the NPRM presupposes, they also face numerous other, countervailing incentives that act as a critical constraint.

The NPRM at least hints at one of these—the need to maintain customer satisfaction—but its consideration of the issue is superficial. It fails to heed the FTC's sound advice, proposing rules despite the absence of any evidence to suggest that any broadband Internet access service provider has *ever* sought to extract profits from application providers in an anti-competitive manner. If the NPRM were correct that market forces are "unlikely" to trump the alleged incentive to extract profits from content, application, and service providers, one might expect that marketplace behavior would bear it out—but it does not. Moreover, the NPRM also ignores the possibility that broadband Internet access service providers might seek to impose fees on application providers for legitimate business reasons—for example, in a valid attempt to recover extraordinary costs or as compensation for mutually beneficial service enhancements.[101] In any event, the NPRM does not identify any instances of those types of fees being imposed,

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99 FTC Report at 125 ("[I]t is not possible, based on generalized data or predictions of future business arrangements, to conclude that the online content and applications market suffers or will suffer from anticompetitive conduct.").

100 *Id.* at 157.

101 *See infra* p. 55 (noting acknowledged examples of instances in which broadband Internet access service providers may legitimately assess such charges and application providers may want to pay them).

either. In short, there is no empirical basis for the proposed regulations, even apart from the significant harms they could impose.[102]

B. Regulation in This Context Risks Significant Harms.

Regulating in the absence of any demonstrated harms is not merely unnecessary, but affirmatively harmful, as such regulation may discourage if not outright prohibit beneficial practices and thus undermine other critical policy goals. This concern is particularly pronounced in the context of a marketplace that is fast moving and constantly changing—which indisputably describes the broadband arena, as the NPRM recognizes.[103] Whether regulation takes the form of rules or even case-by-case adjudication,[104] it is difficult (if not impossible) to keep pace with ongoing developments. And the risk of making erroneous judgments—including proscribing conduct that would benefit consumers (or at least not harm them)—is especially high when the marketplace is constantly shifting.

1. Overbroad Regulation Would Prohibit Broadband Internet Access Service Providers from Engaging in Practices That Benefit Consumers.

To the Commission's credit, the NPRM in places appears to acknowledge the need to avoid overbroad regulation that ends up causing harm. As discussed at greater length below, the NPRM recognizes the importance of encouraging continued investment and experimentation, as well as the critical fact that some forms of "discrimination" may *benefit* consumers, and it

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102 If anything, the inverse of the Commission's fear is occurring in the marketplace: Google is attempting to leverage its enormous traffic flow—and the huge transport costs it imposes—in an effort to extract concessions from broadband Internet access service providers, including free collocation privileges and other benefits that would give it significant competitive advantages vis-à-vis other application providers. *See infra* Section II.D.

103 *See, e.g.*, NPRM ¶¶ 12, 48.

104 *See infra* p. 35 (describing the harms of case-by-case adjudication in the absence of clear standards to apply).

correspondingly acknowledges a concern that regulation that goes too far could jeopardize these considerations.[105]

But the Commission ultimately pays far too little heed to these observations. Perhaps the most obvious example of this disconnect is the NPRM's startling conclusion that *any* form of payments from application providers to broadband Internet access service providers nevertheless should be banned outright, and its ensuing proposal to impose a prohibition on discrimination broader than that faced by common carriers under Title II and with less clear parameters. As discussed at greater length below, charging application providers and others may well have important pro-competitive effects and thus should be permitted in at least some circumstances.[106] And the uncertainty as to what other practices not specified in the NPRM would be unlawful would cause significant problems. TWC and others have explained during prior stages of this proceeding that such vague and overbroad restrictions would chill infrastructure investment and innovation, as broadband Internet access service providers could not take any action without fear of being found in violation.[107] The FTC likewise cautioned that "[i]ndustry-wide regulatory schemes—particularly those imposing general, one-size-fits-all restraints on business conduct—may well have adverse effects on consumer welfare, despite the good intentions of their

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105 *See infra* Section II.A (need to preserve investment and innovation), Section II.B (need to allow beneficial forms of "discrimination").

106 *See infra* Section II.B.

107 *See, e.g.*, TWC Net Neutrality Comments at 22-24; Larry F. Darby, *The Informed Policy Maker's Guide to Regulatory Impacts on Broadband Network Investment*, American Consumer Institute, at 1-3 (Nov. 11, 2009) (explaining that net neutrality restrictions and the often extended uncertainty that results from regulation discourages firms from engaging in activity that would otherwise enhance shareholder value).

proponents."[108] In this regard, the FTC specifically noted the negative impact that such regulation could have on the development of new products and services.[109]

Herein lies one of the most significant flaws in the NPRM. With its broad and vague prohibition on "discrimination," the NPRM would make it difficult if not impossible for broadband Internet access service providers to pursue various means of expanding consumer choice. The proposed nondiscrimination requirement would run the risk of interfering with customization and choice, even though preserving such attributes goes to the heart of the rationale for regulating. For example, consumers may see value in a service plan that blocks P2P traffic as a means of offering enhanced service or preventing minors from stealing copyrighted material. Or consumers might desire a service plan that facilitates access to certain content—say, family-friendly or religious-oriented websites—to the exclusion of content they may find undesirable. TWC and others may well seek to develop such offerings in response to their subscribers' needs. But broadband Internet access service providers would have no way to know if they could introduce such offerings in the face of an overbroad nondiscrimination requirement and the specter of enforcement liability. It is possible that the carve-out for "reasonable network management" discussed below would apply to some potential offerings, but then again, it might not. The chilling effect brought about by such ambiguities is one of the core flaws in the NPRM.

About the only thing broadband Internet access service providers would be able to do safely under the NPRM's proposed regime would be to offer services that allow consumers to

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108 FTC Report at 11.

109 *See id.* at 15 ("Even if regulation does not have adverse effects on consumer welfare in the short term, it may nonetheless be welfare-reducing in the long term, particularly in terms of product and service innovation."); *id.* at 160 ("[R]egulation that nominally seeks to protect innovation in content and applications by prohibiting broadband providers from charging for prioritized delivery over their networks actually could erect barriers to new content and applications that require higher-quality data transmission.").

access any website they want—something that they have done and will do without any regulatory compulsion. Yet even in this respect, the NPRM does not effect a lawful preservation of the status quo. Instead, by purporting to tell broadband Internet access service providers through force of law what content they may or may not be allowed to make available, the NPRM infringes on the editorial choices of such providers.

The harms to consumers extend well beyond having fewer options. For example, one observer has described the domino effect that could follow from over-restrictive regulation in this context:

> If regulations limit the ability of network investors to differentiate their services, find innovative pricing solutions, prioritize and manage network traffic, network costs will increase and make investment less attractive, which will reduce network investment. Less investment means poorer service quality, and higher network costs means rising broadband service prices. Higher broadband prices can result in depressed demand, which will raise the cost of service for remaining consumers.[110]

A coalition of civil rights organizations has made clear that these consequences would preserve—if not expand—the digital divide, by erecting new barriers (or entrenching old ones) to broadband adoption.[111] Accordingly, these groups recently urged the Commission to examine a host of issues relating to the potential impact of net neutrality regulation on the use of broadband by minorities and low-income consumers in particular.[112]

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110 Pociask at 14; *see also infra* pp. 57-58 (describing how preventing broadband Internet access providers from charging application and service providers shifts costs to consumers in a manner that risks deterring adoption).

111 Letter from David Honig, Counsel for Civil Rights Organizations and Elected Officials, to Chairman Julius Genachowski, FCC, GN Docket No. 09-191 (filed Jan. 4, 2010) (attaching "Proposal for Staff Workshop and Field Hearing on Network Neutrality and the Digital Divide").

112 *Id.*

It is difficult to predict the full extent of such problems, but that is precisely the point. Indeed, the admonitions of the FTC and Department of Justice concerning the risks of overbroad regulation stem in part from their recognition that the full downside cannot yet be known. As explained by the FTC:

> Policy makers should be wary of calls for network neutrality regulation simply because we do not know what the net effects of potential conduct by broadband providers will be on consumers, including, among other things, the prices that consumers may pay for Internet access, the quality of Internet access and other services that will be offered, and the choices of content and applications that may be available to consumers in the marketplace. Similarly, we do not know what net effects regulation to proscribe such conduct would have on consumers.[113]

The Department of Justice likewise has noted that the Commission "should be highly skeptical of calls to substitute special economic regulation of the Internet for free and open competition enforced by the antitrust laws."[114]

Such statements highlight the extent to which the NPRM is out of step with the judgment of other federal agencies that have considered similar issues. As discussed, the FTC and the Department of Justice see a marketplace that is functioning quite well and to the benefit of consumers and have concluded that regulation therefore is unnecessary if not potentially harmful. Particularly in light of these agencies' expertise in competition policy and consumer protection, the Commission should not be so quick to part ways with them, as contemplated by the NPRM. Rather, the Commission should take their warnings at least as seriously as

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113 FTC Report at 157; *see also id.* at 160 ("[B]road regulatory schemes almost certainly will have unintended consequences, some of which may not be known until far into the future. After all, even the most carefully considered legislation is likely to have unforeseen effects."); *id.* (stating that policymakers "should be wary of enacting regulation solely to prevent prospective harm to consumer welfare, particularly given the indeterminate effects on such welfare of potential conduct by broadband providers and the law enforcement structures that already exist").

114 Ex Parte Filing, U.S. Dep't of Justice, WC Docket No. 07-52, at 1 (filed Sept. 6, 2007).

advocates' speculative theories that broadband Internet access service providers pose a threat to the open Internet.

Given the absence of clear standards, the NPRM's proposed case-by-case approach to adjudicating violations is an invitation to arbitrary and capricious decisionmaking and a perpetuation of the very type of regulatory uncertainty that stifles capital investment.[115] As they stand, the proposed rules would allow the Commission to apply a type of roving enforcement standard under which broadband Internet access service providers would learn that they may have done something unlawful only after they have expended significant effort and cost to implement new business practices in good faith. The logical consequence would be to put the breaks on conduct that is intended to benefit consumers—thereby fulfilling the predictions noted above.

2. Experience Demonstrates the Problems with Attempting to Regulate a Fast-Changing Industry.

Prior proceedings involving Internet access services vividly illustrate the risks of regulating based on guesswork, as many dire predictions that were made with great certitude have proven to be way off-base. For example, when AOL merged with Time Warner Inc., some parties expressed grave concerns that AOL would leverage its dial-up business to dominate the marketplace for broadband Internet access. The Commission agreed with this assessment, finding it "implausible that AOL Time Warner—with the leading brand among ISPs as well as the largest library of proprietary content in the world at its disposal—would be unable to leverage these resources and others to obtain carriage for AOL Internet services on the facilities

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115 NPRM ¶¶ 12, 110.

of unaffiliated cable operators."[116] Taking its prediction one step further, the Commission stated that it was "equally *certain* that the merged firm would be able to obtain such carriage regardless of whether it were to discriminate against unaffiliated ISPs on its own platform."[117] According to the Commission, the exercise of this leverage, in turn, "would imperil the continued existence of a vibrant and competitive free market for development of the Internet."[118]

Contrary to the Commission's expectations, AOL was not able to reach mutually satisfactory agreements for carriage on any other cable system and did not gain a significant foothold as a broadband Internet access service provider even in Time Warner Cable's service areas. In fact, far from becoming dominant in the market for broadband Internet access as the Commission feared, AOL exited that market entirely and now focuses on providing free online content and applications, relying on an advertising-supported model.[119] For all the sturm and drang that led to the imposition of various merger conditions, the "factual" assumptions

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116 *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, Memorandum Opinion and Order, 16 FCC Rcd 6547 ¶ 90 (2001).

117 *Id.* (emphasis added).

118 *Id.* ¶ 61.

119 *See, e.g.*, Matthew Karnitschnig, *Time Warner Posts Solid Profit, Driven by Cable Unit*, WALL ST. J., Aug. 3, 2006, at A3 ("Instead of relying on subscription revenue as it has in the past, AOL is shifting to an advertising-supported model similar to those of Yahoo Inc. and Google Inc."); *America Online Has Dropped Its Complete Broadband Package*, Anick Jesdanun, PHILADELPHIA INQUIRER, Feb. 29, 2004. Time Warner Inc. recently spun off AOL, formally ending what *The New York Times* has called "the worst [transaction] in history." Tim Arango, *How the AOL-Time Warner Merger Went So Wrong*, N.Y. TIMES, Jan. 10, 2010.

underlying them—which were the same kind of speculative concerns expressed here—turned out to be dead wrong, rendering the regulations entirely unnecessary.[120]

Similar issues arose outside the context of the AOL-Time Warner merger, as a number of parties lobbied more broadly for the imposition of "open access" mandates, arguing that the fate of the Internet hung in the balance.[121] Certain non-facilities-based ISPs sought to force cable operators to share their networks on nondiscriminatory terms, and some advocacy groups—including many of the same parties now arguing for net neutrality regulation—asserted that a failure to adopt such requirements would "inevitably destroy the current vigorous competition on the Internet."[122] The Commission wisely declined to take the bait.[123] Not only did the predicted dangers never materialize, but Internet usage grew exponentially, facilities-based competition flourished, and a staggering array of new online content and services became available.

The alarmist cries of parties calling for net neutrality regulation closely resemble these flawed predictions from a decade ago. But the Commission should not be lured into regulating without a more concrete, fact-based justification. Indeed, when the relevant history, the absence of demonstrated problems, the fast-moving nature of the marketplace, and the significant risks of

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120 In fact, the Commission later acknowledged that one of the conditions it imposed, which restricted AOL's provision of advanced instant messaging-based high-speed video services, was based on faulty predictions. *See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee; Petition of AOL Time Warner Inc. for Relief From the Condition Restricting Streaming Video AIHS*, Memorandum Opinion and Order, 18 FCC Rcd 16835 (2003) (lifting condition).

121 *See, e.g., Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, Notice of Inquiry, 15 FCC Rcd 19287 (2000).

122 Comments of Texas Office of Public Utility Counsel, Consumer Federal of America, and Consumers Union, GN Docket No. 00-185, at 9 (filed Jan. 11, 2001).

123 *See Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Declaratory Ruling and Notice of Proposed Rule Making, 17 FCC Rcd 4798 ¶ 43 (2002).

regulating are considered together, the sum of the parts should be restraint, not a gamble on new regulatory mandates. Especially in light of the enormous ongoing effort to promote increased broadband deployment and adoption through the National Broadband Plan, the Commission should be wary of the unintended consequences of the proposed regulatory mandates. Yet, far from maintaining a healthy skepticism in the face of doomsday predictions by proponents of net neutrality regulation, the NPRM credits those predictions based on rank speculation. The Commission should insist on adherence to the fact-based, data-driven analysis it has consistently championed and announced it will pursue here.

C. Singling Out Broadband Internet Access Service Providers Would Be Harmful and Unlawful.

The NPRM makes a bad problem worse by proposing to levy these burdens of regulation on only one set of participants in the Internet ecosystem—broadband Internet access service providers—perpetuating what has been a persistent flaw in some proposals to safeguard Internet openness. TWC has previously explained that the Internet is a complex ecosystem, and any effort to regulate thus must account for all of its interrelated participants.[124] The Commission itself has acknowledged the importance of a broad approach. For example, the *Internet Policy Statement* recognized that the principles at stake were relevant not only for broadband Internet access service providers, but also for "application and service providers, and content providers."[125] Similarly, the original Notice of Inquiry in the Commission's *Broadband Industry Practices* proceeding likewise sought "a fuller understanding of the behavior of broadband

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[124] *See* TWC Net Neutrality Comments at 24-26; *see also* DOJ Comments on NBP Economic Issues at 4 (stating that "[b]roadband services are one part of a wider information technology ecosystem that ultimately delivers value to consumers," which also includes the "content and applications available," among other things).

[125] *Internet Policy Statement* ¶ 4; NPRM ¶ 52 (describing principle favoring competition for Internet access and Internet content).

market participants today, including network platform providers, broadband Internet access service providers, other broadband transmission providers, Internet service providers, Internet backbone providers, content and application service providers, and others."[126]

The broad approach that characterizes existing Commission policy on Internet openness was sensible and it remains even more critical today. Indeed, as discussed further below, other participants in the Internet ecosystem with the ability to control users' access to the Internet and all of the services, applications, and content available on it are engaging in the very sort of non-neutral practices that the NPRM appears to target.[127] The NPRM appropriately notes that the Commission's "proposals should have broad application so that the protections that [it] propose[s] are widely enjoyed."[128]

This recognition then falls by the wayside, however, as the NPRM proposes to single out broadband Internet access service providers for particular regulatory burdens. This selective regulation would abandon the current broad approach and result in significant marketplace distortions. As discussed below, permitting Google to leverage its dominant position in the marketplace by, for example, charging for priority placement on its search engine or insisting that broadband Internet access service providers allow Google to collocate servers in a manner that grants it preferential treatment—while prohibiting comparable conduct by such providers—would be bad for competition and consumers.[129] Worse, by excluding such entities from its

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126 *Broadband Industry Practices*, Notice of Inquiry, 22 FCC Rcd 7894 ¶ 8 (2007) ("*Broadband Industry Practices NOI*").

127 *See infra* Section II.D.

128 NPRM ¶ 55; *see also id.* ¶ 52 (stating that a "key goal" of the Commission is "promoting competition for Internet access and Internet content, applications, and services"); *id.* ¶ 35 (quoting the Commission's earlier statement in the *Broadband Industry Practices NOI* concerning the broad scope of the inquiry).

129 *See infra* Section II.D.

proposed regulatory scheme, the Commission would leave consumers without any recourse.[130] At the same time, as discussed above, the Commission would effectively freeze innovation at the network level.[131] Such results would pose a needless threat to the vibrancy of today's well-functioning broadband marketplace.

Even apart from the ineffectiveness of a regime that applies only to one set of participants that may collectively impact "openness," such underinclusiveness would threaten the legal viability of any rules. There is no basis—whether jurisdictional, technical, or policy-driven—for singling out broadband Internet access service providers in this context.[132] Such unjustified, disparate regulation epitomizes arbitrary and capricious decisionmaking,[133] and it exacerbates the constitutional infirmities of the NPRM's proposals as discussed below.[134]

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130 To the extent the Commission might respond by noting that other avenues for relief exist—whether through the complaint process at the Commission, an antitrust action, or something else—the same would be true with respect to broadband Internet access service providers, further showing that the proposed rules are not necessary to address such misconduct.

131 *See supra* Section I.A.

132 *See infra* Section II.D.2.

133 *See, e.g.*, *Burlington N. & Santa Fe Ry. v. Surface Transp. Bd.*, 403 F.3d 771, 777 (D.C. Cir. 2005) ("Where an agency applies different standards to similarly situated entities and fails to support this disparate treatment with a reasoned explanation and substantial evidence in the record, its action is arbitrary and capricious and cannot be upheld.") (internal citations omitted); *Glickman v. Wileman Bros. & Elliot Inc.*, 521 U.S. 457, 493 (1997) (Souter, J., dissenting) ("[W]hen the government's program targets expression in only a narrow band of a broad spectrum of similar market activities in which its interests appear to be at stake, a question naturally does arise. For the arbitrariness or underinclusiveness of the scheme chosen by the government may well suggest that the asserted interests either are not pressing or are not the real objects animating the restriction on speech. Under such circumstances, the government's obligation to establish the empirical reality of the problems it purports to be addressing requires a sensible reason for drawing the line between those instances in which the government burdens First Amendment freedom in the name of the asserted interest and those in which it does not.") (internal citations omitted).

134 *See infra* Section I.D.2.

In sum, the current scope of the proposed rules is irrational and would undermine many of the NPRM's stated goals. The Commission should take account of just how disruptive its exclusive focus on broadband Internet access service providers would be before it even considers adopting the proposed rules.

D. The Proposed Regulations Raise Serious Legal Concerns.

In addition to the questionable factual and policy bases for regulation, there are significant legal impediments to adopting the proposed rules. In an apparent rush to judgment, the NPRM gives those issues short shrift.

1. The Commission's Authority to Adopt the Proposed Rules Is Uncertain at Best.

The Commission states, without equivocation, that it has authority to regulate the business practices of facilities-based broadband Internet access service providers, restating in capsule form most of the jurisdictional arguments it previously advanced in the *Comcast Network Management Practices Order*.[135] Even apart from the fact that this issue is currently pending before the D.C. Circuit, the Commission's apparent confidence on the matter is unfounded.[136]

In order to exercise ancillary authority, the Commission must show that "the Commission's general jurisdictional grant under Title I covers the regulated subject" and that "the regulations are reasonably ancillary to the Commission's effective performance of its

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135 NPRM ¶ 83.

136 To be sure, the NPRM seeks to accomplish much more than the Commission did in the Comcast case. Thus, if the D.C. Circuit rules that the Commission lacked jurisdiction to take the narrower enforcement action at issue there, it would be hard pressed to justify its much more ambitious proposals here. And if the court is silent on the matter or affirms the Commission on its jurisdictional arguments, the Commission nonetheless would still have to show that its more expansive actions here are within its authority.

statutorily mandated responsibilities."[137] Focusing on the second prong, the Commission first asserts that its proposed action will promote the "federal Internet policy" of section 230(b) as well as the "broadband goals" of section 706(a).[138] As the Commission's formulation implicitly concedes, neither of these provisions sets forth any "mandated responsibilities" at all, instead merely describing certain policy aspirations; in fact, regarding the latter provision, the Commission has elsewhere declared that "section 706 does not constitute an independent grant of authority."[139] If sections 230(b) or 706 conferred ancillary authority to adopt the rules at issue here, the Commission would hold plenary power over any subject they touch—an outcome that the D.C. Circuit has firmly rejected.[140] Moreover, as discussed above and elsewhere, the adoption of vague rules that limit a broadband Internet access service provider from implementing new business models or managing traffic on its network would *undermine*, rather than promote, the policies reflected in sections 230(b) and 706(a).[141]

The Commission's reliance on section 201(b) is equally misplaced.[142] Far from constituting a general grant of authority to prescribe any rule the Commission deems "necessary

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137 *Am. Library Ass'n v. FCC*, 406 F.3d 689, 691-92 (D.C. Cir. 2005) (finding that the Commission acted without an explicit grant of regulatory authority, such that the rules purportedly promulgated under the Commission's ancillary authority were in fact "ancillary to nothing" and therefore invalid).

138 NPRM ¶ 84.

139 *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Memorandum Opinion and Order, 13 FCC Rcd 24012 ¶ 77 (1998).

140 *Am. Library Ass'n*, 406 F.3d at 708 (noting the "categorical rejection" of the notion that the Commission "possesses plenary authority to act within a given area simply because Congress has endowed it with some authority to act in that area") (citation omitted).

141 TWC Net Neutrality Comments at 26.

142 NPRM ¶ 84.

in the public interest" as suggested in the NPRM,[143] that provision—as the Commission acknowledged in the *Comcast Network Management Practices Order*[144]—requires that *common carriers'* charges and practices be just and reasonable.[145] The NPRM offers no connection between the proposed rules and that requirement.[146] To the extent the Commission intended to suggest that it somehow has direct authority to regulate broadband Internet access service providers under section 201(b), that would be true only if such providers were acting as common carriers in the provision of their services. They are not. The Commission of course took great pains to establish the *opposite* proposition, arguing all the way up to the Supreme Court in defense of its information-service classification.[147] Having appropriately classified broadband Internet access service as a Title I service, the Commission cannot now seek to apply core aspects of Title II by regulatory fiat.

The absence of any clear jurisdictional hook is especially problematic here, given the sheer size of the Commission's proposed endeavor. The Commission is not simply proposing to use ancillary jurisdiction to fill a minor gap in the statute's coverage. Rather, the NPRM proposes a vast regulatory regime to govern various practices of broadband Internet access service providers—a monumental undertaking that calls to mind the Supreme Court's

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143 NPRM ¶ 84.

144 *Comcast Network Management Practices Order* ¶ 17.

145 *See NCTA v. Brand X Internet Servs.*, 545 U.S. 976 (2005).

146 The Commission last attempted this argument to justify its enforcement action against Comcast, where it cited no evidence that Comcast's network management practices rendered rates for its broadband Internet access service unjust or unreasonable, or even that they were likely to product that result. *Comcast Network Management Practices Order* ¶ 17.

147 *See Brand X*, 545 U.S. 976.

admonition that Congress does not "hide elephants in mouseholes."[148] And the NPRM's failure to identify any limiting principle on the Commission's authority under the theory it espouses casts further doubt on the soundness of its jurisdictional footing.

Finally, the NPRM fails to account for the logical extension of its jurisdictional case. If the Commission's broad conception of its authority in this context were correct, then it likewise would be empowered to regulate entities other than broadband Internet access service providers that have at least as much of an ability to affect Internet openness. In fact, application providers such as Google, backbone providers, CDNs, and others all provide a transmission functionality that is no less important than that offered by broadband Internet access service providers. Thus, whatever the Commission's jurisdictional footing with respect to broadband Internet access service providers in this context, its authority with respect to other entities within the Internet ecosystem is coextensive.

2. The Proposed Regulations Present Serious First Amendment Concerns.

The Commission also asks whether its proposed rules would raise First Amendment problems due to their impact on broadband Internet access service providers.[149] TWC appreciates the Commission's interest in this issue, particularly given that the Commission dismissed such concerns with little discussion when TWC first raised them.[150] As explained at

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148 *Whitman v. Am. Trucking Ass'n*, 531 U.S. 457, 468 (2001) (reaffirming similar reasoning in *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000)).

149 NPRM ¶ 116.

150 *Comcast Network Management Practices Order* ¶ 43 n.203; *see also* TWC Net Neutrality Comments at 26-28.

greater length in the attached analysis by Professor Laurence Tribe and Thomas Goldstein,[151] net neutrality regulation in general would jeopardize important First Amendment rights by thrusting the government into speakers' choices concerning their private speech.[152] And, applying this analysis to the specific proposals in the NPRM, it is clear that the proposed rules infringe on the protected speech of broadband Internet access service providers in ways that cannot be justified.

As Tribe and Goldstein explain, broadband Internet access service providers engage in speech that is protected under the First Amendment.[153] The proposed rules, however, would unconstitutionally infringe on that protected speech.[154] In particular, the proposed nondiscrimination requirement would undercut broadband Internet access service providers' editorial discretion, forcing them to give all content on their networks equal treatment and preventing them from making certain choices intended to manage their networks for the benefit of consumers—for example, by refusing to carry offensive content or accelerating the delivery of certain content.[155]

Indeed, the proposed rules would make it *per se* unlawful for broadband Internet access service providers to offer any content-differentiated service, even if consumers wanted it. For example, some providers, including TWC, may wish to launch a "family-friendly" service that would permit access only to online content that fits this description—in a manner akin to

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151 Laurence H. Tribe & Thomas C. Goldstein, *Proposed "Net Neutrality" Mandates Could Be Counterproductive and Violate the First Amendment* (Oct. 19, 2009) ("Tribe & Goldstein"), incorporated by reference and attached hereto as Exhibit A.

152 *See, e.g., id.* at 2 (stating that "a central purpose of the First Amendment is to prevent the government from making just such choices about private speech, including decisions about what amount of any given kind of speech is optimal").

153 *Id.* at 3; *see also Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241, 256 (1974).

154 Tribe & Goldstein at 3.

155 *Id.* at 3-4.

Amazon's Kindle service discussed above, which likewise provides access to a limited set of content. But the NPRM would outlaw such an offering, along with any other that provided access to anything less than all content on the Internet. Putting aside the deleterious effect on consumer choice, the result is a dramatic infringement on broadband Internet access service providers' protected speech. Critically, the fact that broadband Internet access service providers could be *required* to provide certain content—or more particularly, *all* content at all times, as the NPRM would command—negates a key aspect of the Commission's constitutional defense in the *Comcast Network Management Practices Order*,[156] thereby inviting the very constitutional problems that it claimed to have avoided in that case.

Further, as discussed above, the scope of the draft rules is so vague that they would chill protected speech for fear of violation—an outcome that is contrary to basic First Amendment principles.[157] Rather than advancing clear standards that explain what types of conduct are permitted and prohibited, the NPRM would leave broadband Internet access service providers guessing about the lawfulness of their practices until after they have devoted substantial time and resources to a particular initiative—at which point they could be subject to enforcement action. In response to such uncertainty, such providers likely would refrain from undertaking that significant expense and risk in the first place, and innovation and consumer choice would suffer.[158] And in many cases, broadband Internet access service providers may not even have the

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156 *Comcast Network Management Practices Order* ¶ 43 n.203 (rejecting the argument that the proposed enforcement action in connection with P2P traffic violated the First Amendment because, among other things, the Commission claimed it was "not dictating the content of any speech").

157 Tribe & Goldstein at 3-4; *see also supra* Section I.B.1.

158 Tribe & Goldstein at 4 ("A BSP will not create new products, services or business models or implement new forms of traffic management if it fears a later determination by the FCC that those practices are unlawful.").

luxury of choice in this regard, as they could find themselves unable to provide services of their choosing. For example, the decision to provide access to all online content is just as much of a protected editorial choice as the decision to provide access to targeted content—and it is one that is regularly made today, without compulsion. But as discussed below, if the Commission adopts rules that prevent broadband Internet access service providers from employing reasonable means of managing traffic, they may not be able to provide a service that provides robust general access at a reasonable price because the substantive limits placed on their use of network management techniques and the uncertainty caused by vague rules would interfere with their efforts to do so.

Such governmental intrusion on protected speech is presumptively unconstitutional. The NPRM loses sight of the proper analysis, asking whether any burdens on broadband Internet access service providers resulting from the proposed rules would "be outweighed by the speech-enabling benefits" of those rules.[159] As explained herein, the assumption that the proposed rules would have speech-enabling benefits is deeply flawed. Even if it were not, however, the notion that the government can suppress the speech of one group in favor of that of another group is anathema to the First Amendment and hardly provides a sound basis for assessing the proposed rules. Rather, to withstand scrutiny, the Commission must show, at the very least, that it is attempting to address a significant harm that is real, not conjectural, and that its proposed rules are narrowly tailored so as not to restrict more speech than is necessary to reach the Commission's objectives.[160] The regulations as proposed do not satisfy these bedrock requirements.

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159 NPRM ¶ 116.

160 Tribe & Goldstein at 4. This presumes that the intermediate scrutiny standard would apply, under the misguided theory that net neutrality regulation is content-neutral. *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 662 (1994) ("*Turner I*"); *see also Turner*

First, the NPRM fails to identify a sufficient need for regulation.[161] As discussed above, the marketplace has worked to ensure that consumers can access the content and services they want.[162] The NPRM does not refute that critical fact, instead merely theorizing as to whether broadband Internet access service providers might engage in conduct that undermines the openness of the Internet. But such speculation, without any empirical evidence to support it, is inadequate to show an important interest that needs to be addressed.[163] And while the NPRM's stated goal of enhancing communication on the Internet may be an important objective, there is a big difference between that abstract interest and the narrower goals that the proposed rules seek to address, including preventing any and all, let alone just unreasonable, discrimination by broadband Internet access service providers. Indeed, the NPRM includes nothing to demonstrate that the proposed rules would enhance communication in a direct and material way.

Second, even if evidence were to emerge in support of the proposition that consumers are actually being denied access to Internet content or services—and there is no plausible basis to expect that it would—the proposed rules are not appropriately tailored to remedying such harms

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Broad. Sys., Inc. v. FCC, 520 U.S. 180 (1997); *United States v. O'Brien*, 391 U.S. 367, 377 (1968).

161 Tribe & Goldstein at 4.

162 *See supra* Section I.A; *see also* Tribe & Goldstein at 4 (noting that neither Congress, nor the Commission, nor the FTC, nor DOJ has identified any reason to believe that broadband Internet access service providers are interfering with the ability of their subscribers to access the Internet).

163 Tribe & Goldstein at 4; *see also, e.g.*, *Edenfield v. Fane*, 507 U.S. 761, 770-71 (1993) (restrictions on speech must be based on something more than "mere speculation and conjecture"); *Turner I*, 512 U.S. at 664 ("When the Government defends a regulation on speech as a means to redress past harms or prevent anticipated harms, it must do more than simply posit the existence of the disease sought to be cured. It must demonstrate that the recited harms are real, not merely conjectural, and that the regulation will in fact alleviate these harms in a direct and material way.").

while minimizing their interference with protected speech.[164] Rather, those rules would broadly prohibit all forms of "discrimination," even when it benefits consumers—as the NPRM concedes it would do.[165] As a result, broadband Internet access service providers would be unable to offer content-differentiated services such as those referenced above (such as family-friendly services), while also preventing them from undertaking measures necessary to ensure that their services function to the benefit of consumers.[166] In effect, the rules proposed by the NPRM would be akin to swatting a fly with a sledgehammer.

The lack of narrow tailoring is also evident in the rules' exclusive focus on broadband Internet access service providers.[167] As discussed above, the NPRM fails to address the conduct of entities other than broadband Internet access service providers that can affect Internet openness.[168] And as discussed below, under the regime contemplated by the NPRM, nothing would stop dominant players such as Google from discriminating and preventing speakers from being heard at all—the opposite outcome from what the NPRM describes as its goal.[169] That unjustified disparity significantly compounds the constitutional problems presented by the proposed rules.[170] Finally, as Tribe and Goldstein explain, the notion that these harms could be

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164 Tribe & Goldstein at 4-5.

165 *See infra* Section II.B; *see also* Tribe & Goldstein at 4-5.

166 *See supra* Section I.B.1.

167 Tribe & Goldstein at 5.

168 *See supra* Section I.C.

169 *See infra* Section II.D.

170 Tribe & Goldstein at 5-6; *see also Turner I*, 512 U.S. at 660 ("[R]egulations that discriminate among media, or among different speakers within a single medium, often present serious First Amendment concerns."); *Minneapolis Star & Tribune Co. v. Minn. Comm'r of Revenue*, 460 U.S. 575, 585 (1983) ("[D]ifferential treatment . . . suggests that the goal of the regulation is not unrelated to suppression of expression, and such a goal is presumptively unconstitutional.").

avoided through capacity upgrades fails to rescue the proposed rules from these various infirmities.[171]

The Commission must address these deficiencies if it expects any net neutrality requirements to pass muster. Although TWC believes that the case for regulation simply has not been made, it nevertheless proposes modifications below, which seek to lessen the various policy and legal flaws inherent in the draft rules.

II. IF THE COMMISSION DECIDES TO ADOPT RULES, IT SHOULD MODIFY ITS PROPOSALS TO LESSEN UNLAWFUL AND COUNTERPRODUCTIVE RESULTS

If the Commission decides to adopt rules in spite of the many reasons for continued restraint, it must make significant changes to the draft proposals to diminish the risk that they would end up undermining the Commission's objectives. Indeed, the rules proposed in the NPRM would neither promote "openness" nor preserve incentives for investment and innovation. Especially because the success of the National Broadband Plan will hinge on preserving such incentives, the Commission must get this right. The modifications recommended below will by no means ensure the success of any net neutrality regime, but they would represent a vast improvement over the framework proposed by the NPRM, which almost certainly would create far more problems than it would solve.

A. The Commission Should Ensure That Any Rules It Adopts Preserve Broadband Internet Access Service Providers' Flexibility To Meet Consumers' Needs Through Evolving Business Models and Practices.

As discussed above, investment and innovation by the private sector have been crucial to the success of broadband in this country to date.[172] A chorus of parties has recognized that future policy must preserve broadband Internet access service providers' flexibility to adapt to a

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171 Tribe & Goldstein at 5.

172 *See supra* Background, Section 2.

changing marketplace if they are to continue investing and enhancing consumers' enjoyment of the Internet. Conversely, undue restrictions on such providers would put sand in the gears that are driving growth and prosperity. The importance of this point cannot be overstated. If the Commission fails to preserve sufficient flexibility for broadband Internet access service providers to innovate, its core objectives of increasing broadband availability and adoption will not be realized.

In the build-up to its proposed rules, the NPRM appropriately sounds a note of caution that seems to reflect these widely held views. The NPRM seeks comment on the impact its rules would have on investment and innovation,[173] and it makes clear its desire to avoid any deleterious effects of regulation. In particular, the NPRM acknowledges that "[b]roadband providers' ability to innovate and develop valuable new services must co-exist with the preservation of the free and open Internet that consumers and businesses of all sizes have come to depend on."[174] The NPRM accordingly recognizes that broadband Internet access service providers "must be able to experiment with new technologies and business models in ways that benefit consumers," and also proclaims an intent to provide "clearer expectations" to industry and consumers.[175] For example, with respect to retail pricing, the NPRM helpfully indicates that

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173 *See, e.g.*, NPRM ¶ 111 (asking what "would be the effects on future innovation" if broadband Internet access service providers were prohibited from charging fees to content, service, and application providers).

174 *Id.* ¶ 9.

175 *Id.* ¶¶ 103, 108; *see also id.* ¶ 9 (recognizing the importance "of preserving and protecting the ability of broadband providers to experiment with technologies and business models to help drive deployment of open, robust, and profitable broadband networks across the nation").

it would be reasonable for a broadband Internet access service provider to offer plans that employ usage-based charges as opposed to flat monthly fees.[176]

While TWC applauds these preliminary statements, the NPRM as a whole fails to live up to them. Despite the stated commitment to protecting investment, innovation, and experimentation by broadband Internet access service providers, the NPRM ultimately would sacrifice those principles in favor of rules that would severely curtail the ability of such providers to undertake any such efforts. Perhaps most notably, as discussed further below, the NPRM proposes a flat prohibition on all practices that may discriminate in any way, including those that benefit consumers.[177] Moreover, the NPRM notes the importance of allowing broadband Internet access service providers to manage traffic on their networks, in light of demonstrated problems such as network congestion, but then proposes rules that would leave them guessing about the boundaries of that ability.[178] Those leading examples are critically important, but the Commission must bear in mind the importance of preserving investment incentives and protecting the ability to innovate and experiment as it considers *every* aspect of the proposals under considerations.

Accordingly, if the Commission proceeds to adopt rules of any kind, it should emphasize at the outset that its rules should not be construed to prevent broadband Internet access service providers from experimenting with different business models and practices—whether such practices relate to pricing, network management, or any other aspect of their services. On this score, the Department of Justice recently advised the Commission to "avoid restricting the ability

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176 *Id.* ¶ 137.

177 *See infra* Section II.B (discussing beneficial forms of "discrimination," such as fee-based service enhancements).

178 *See infra* Section II.C.

of providers to offer new and innovative forms of service packages or pricing policies."[179] All players in the Internet ecosystem—including broadband Internet access service providers—require such flexibility as they strive to meet consumers' needs and accommodate new applications and services in an ever-changing marketplace. Providing such clear guidance up front will go far toward establishing the type of certainty that the NPRM concedes is important to the future of the Internet.

B. The Commission Should Replace the Proposed "Nondiscrimination" Requirement With a Prohibition Against "Unreasonable Discrimination."

One key application of this need for flexibility arises in connection with the NPRM's proposed nondiscrimination mandate. A core concern underlying the NPRM is the possibility that providers of broadband Internet access services will discriminate against providers of content, applications, and services. In proposing a solution to that perceived problem, the Commission goes much too far, setting forth a rigid rule that would outlaw "discrimination" except in some limited respects relating to network management. While sometimes associated with more nefarious motives in everyday usage, "discrimination" in economic terms refers to *any* differential treatment, whether beneficial or harmful. By failing to target *harmful* discrimination, the proposed nondiscrimination requirement has the potential to be substantially (and unpredictably) overbroad, barring practices that benefit consumers and chilling the very experimentation and innovation that the NPRM purports to protect.

1. The Proposed Rules Would Prohibit Beneficial Practices and Disserve the NPRM's Goals.

The NPRM starts with a sound premise: not all forms of "discrimination" can be considered *per se* harmful. It rightly describes the "key issue" as "distinguishing socially

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179 DOJ Comments on NBP Economic Issues at 27.

beneficial discrimination from socially harmful discrimination in a workable manner,"[180] elaborating on the point by way of a formulation offered by one expert (who is now the Commission's Chief Technologist): "Can we limit how network operators can discriminate in a manner that [1] prevents them from fully exploiting market power in ways that seriously harm users, and [2] does not prevent them using discrimination in ways that greatly benefit users?"[181] The FTC has identified the same basic challenge, stating that "[e]ven assuming that discrimination against content or applications providers took place . . . there remains the question"—which the FTC deemed "unanswerable in the abstract"—of "whether such discrimination would be harmful, on balance, to consumer welfare."[182]

Having thus posed the central question, however, the NPRM proceeds to foreclose any principled answer. Rather than propose a rule that targets *harmful* discrimination, the NPRM would require broadband Internet access service providers to "treat lawful content, applications, and services in a nondiscriminatory manner," period.[183] As discussed above, this vague requirement would preclude broadband Internet access service providers from undertaking a range of practices that would otherwise expand customization and consumer choice.[184] According to the NPRM, it also means, at a minimum, that broadband Internet access service providers would not be allowed *under any circumstances* to charge application, content, and

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180 NPRM ¶ 103.

181 *Id.* ¶ 103 n.226 (quoting Jon M. Peha, *The Benefits and Risks of Mandating Network Neutrality and the Quest for a Balanced Policy*, 1 INT'L J. COMM. 644, 645 (2007)); *see also id.* ¶ 111 (seeking comment on the "effects on future innovation" of a rule barring discrimination), Peha at 150 (explaining in detail why "discrimination is value for both users and consumers").

182 *See* FTC Report at 157-58.

183 NPRM ¶ 104.

184 *See supra* Section I.B.

service providers for "enhanced or prioritized access" to the broadband Internet access service provider's subscribers.[185] Remarkably, the NPRM proposes this absolute ban without any showing that such charges are inherently harmful to such providers or consumers; to the contrary, as just noted, the proposal follows on the heels of an acknowledgement that practices such as prioritization could well be "socially beneficial."[186] The proposed rule therefore would jettison the nuanced analysis that the NPRM itself acknowledges to be necessary, substituting a flat ban on charges for service enhancements, irrespective of context or consequences.

Such charges in fact may be distinctly pro-competitive in certain circumstances. For example, allowing a broadband Internet access service provider to offer fee-based service enhancements could offer an efficient alternative to self-provisioning costly network facilities, hiring a CDN, or undertaking other means of competing with more entrenched providers that have their own private "fast lanes." That is particularly true for smaller entities and new entrants that may seek to compete. The FTC has observed that "[p]rioritization technologies provide potential benefits for ISPs, content and applications providers, and consumers" by, among other things, "improv[ing] QoS for certain content and applications, reduc[ing] overall infrastructure costs, and allocat[ing] resources to their highest-value uses."[187] It is difficult to understand the public policy rationale for barring even consensual arrangements that would enable a small entrepreneur to keep up with a dominant provider like Google, which has enormous structural advantages in light of its vast transmission network and distributed servers.[188]

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185 NPRM ¶ 106.

186 *Id.* ¶ 103; *see also* FTC Report at 96 (describing potential benefits of prioritization).

187 FTC Report at 96.

188 *See infra* pp. 75-76.

Moreover, allowing companies like Google to pay for enhanced access to subscribers by collocating network equipment at broadband Internet access service providers' points of presence—while prohibiting a competing means of paying for enhancements on a per-transmission or per-bit basis—would be wholly arbitrary and potentially quite destructive to innovation.[189] The NPRM offers no theory as to why it should be *per se* unlawful for broadband Internet access service providers to charge other entities (including those that are willing to pay) for "enhanced or prioritized access" to their subscribers, but *per se* permissible and not similarly detrimental to "openness" when the exchange is reversed.

Charges to application or content providers also might be justifiable in light of cost considerations or the scarcity of bandwidth—a point that is supported by the academic research cited in the NPRM.[190] For example, as the Commission's Chief Technologist has explained, a "policy designed to protect beneficial uses of discrimination might allow" various practices by network owners, including "charg[ing] a different price for different classes of traffic. The higher price would be justified because the traffic requires superior quality of service, consumes more of a limited resource, has a greater adverse effect on other traffic, or is otherwise linked to cost (or opportunity cost)."[191] Indeed, pricing based on cost-causation principles has long been deemed reasonable and presumably would continue to be the norm in all other contexts except broadband—producing the anomalous result that competitive broadband Internet access service

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189 *See infra* p. 76.

190 NPRM ¶ 103 n.226.

191 *See* Peha at 660-61; *see also* Robert D. Atkinson & Philip J. Weiser, *A "Third Way" on Network Neutrality*, The Information Technology and Innovation Foundation at 13 (May 30, 2006), http://www.itif.org/files/netneutrality.pdf (stating that "[t]o the extent that [a] broadband provider could justify [a] preferential arrangement as a legitimate business arrangement—say, that there was only sufficient bandwidth to provide [a] service to one of . . . two firms—it could be upheld").

providers would be subject to a more stringent standard than monopoly providers of telephone services.[192] The NPRM appropriately identifies usage-based billing for *end users* as a legitimate and potentially beneficial approach to aligning prices with usage patterns.[193] But it fails to explain why charges to application or content providers based on similar rationales should be subject to a blanket ban.

Further, a flat ban on charges to anyone but end users would prevent possible savings for consumers, equivalent to a ban on toll-free numbers in the telephone context. TWC previously has explained that forcing consumers to bear all network costs—which are increasing with the explosion of Internet traffic[194]—could result in significantly increased prices for broadband services.[195] The proposed rules would leave broadband Internet access service providers with only one source for recovering their costs—end users—while giving large application providers and other key entities impacting utilization of broadband networks complete discretion to recover their costs in whatever manner they choose. Even apart from this unjustified disparity, a regime that foists all costs on broadband Internet access subscribers in all cases cannot be squared with the Commission's paramount objectives of increasing broadband adoption and utilization. Rather, it produces what the National Executive Director for the League of United Latin American Citizens has deemed a "regressive 'broadband tax'" that would shift costs way from application and service providers to consumers—including, most troublingly, disadvantaged

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192 *See infra* Section II.B.3.

193 *See* NPRM ¶ 137.

194 *Id.* ¶ 80 ("Although network operators may seek to alleviate congestion by increasing capacity, such actions would involve costs—in some cases large costs—and revenue opportunities might not justify the required investment.").

195 TWC Net Neutrality Comments at 22 (citing Pociask at 14).

populations that have yet to adopt broadband and will be even less likely to do so in the face of such costs.[196]

The point of the foregoing discussion is not that charging for service enhancements is *necessarily* reasonable. Rather, the critical flaw with the proposed nondiscrimination requirement is that there is no basis for presuming that such charges are necessarily *unreasonable*. Indeed, it makes no sense for the NPRM to state that broadband Internet access service providers "*must be* able to . . . experiment with new . . . business models,"[197] only to propose a rule that would proscribe such experimentation with pricing models that entail any form of payment for legitimate prioritization or service enhancements. Avoiding a rigid ban on all forms of "discrimination" in pricing practices (or other business practices that do not fall under "reasonable network management") is essential if the Commission is to live up to its stated objectives.[198]

2. A Prohibition on "Unreasonable Discrimination" Would Preserve Practices That Benefit Consumers.

As an alternative to an absolute nondiscrimination requirement, the NPRM asks whether a prohibition on "unreasonable discrimination" would be preferable.[199] It would, without

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196 *See* Brent A. Wilkes, *Net neutrality rules shouldn't be used to shift costs to consumers,* MERCURY NEWS, Jan. 5, 2010.

197 NPRM ¶ 103 (emphasis added).

198 The disconnect between what the NPRM seeks to achieve and the path it proposes to get there epitomizes arbitrary and capricious agency action. *See, e.g., Tripoli Rocketry Ass'n v. Bureau of Alcohol, Tobacco, and Firearms,* 437 F.3d 75, 81 (D.C. Cir. 2006) ("In order to survive under the arbitrary and capricious standard, an agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.") (internal citations and quotations omitted); *Casino Airlines, Inc. v. Nat'l Transp. Safety Bd.*, 439 F.3d 715, 717 (D.C. Cir. 2006) (noting the need to address whether "the agency's path may reasonably be discerned") (internal citations and quotations omitted).

199 NPRM ¶ 109.

question. Even some leading proponents of net neutrality now appear to concede the need for such an approach.[200] In terms of defining this concept, an appropriate starting point would be to assess whether a particular entity has market power and has abused it in some anti-competitive manner. Importantly, relying on such an antitrust-related standard would not prevent the Commission from pursuing consumer protection measures within its authority that are unrelated to the exercise of market power, while still guarding against conduct that is manifestly anti-competitive.

This approach would be consistent with proposals from several academics and other observers, including those whose analyses are cited in the NPRM. For example, the Commission's Chief Technologist has stated that regulatory policy should limit discriminatory practices only to the extent they allow network operators with market power "to significantly harm Internet users."[201] Others concur that any restrictions on discrimination should address the possession of market power.[202] Again, the NPRM does not even assert, much less demonstrate, that any broadband Internet access service provider actually possesses market power; but even with respect to entities that do possess market power, these proposals recognize that the

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200 *See, e.g.*, Eric Schmidt, Chairman and CEO, Google, and Lowell McAdam, President and CEO, Verizon Wireless, *Finding common ground on an open Internet*, Oct. 21, 2009, *at* http://googlepublicpolicy.blogspot.com/2009/10/finding-common-ground-on-open-internet.html (stating that broadband network providers should have "flexibility to manage their networks" as long as they "don't *unreasonably* discriminate in ways that either harm users or are anti-competitive") (emphasis added). It is unclear whether Mr. Schmidt views his recent proposal to ban only *unreasonable* discrimination as a departure from, or somehow consistent with, with his company's prior proposals to ban all charges for service enhancements.

201 Peha at 660.

202 Atkinson & Weiser at 12 (proposing an approach that focuses on "discriminatory conduct by providers with market power").

Commission's rules should not interfere with reasonable forms of discrimination that do not harm consumers.

In all events, if the Commission were to conclude that an antitrust-related standard is somehow insufficient to achieve its goals in this context, it should not impose a rule that is more stringent than the traditional Title II test of "unreasonable discrimination." While importing that aspect of the common carrier regulatory framework still would be overly restrictive, a rule prohibiting unreasonable discrimination at least would avoid the upside-down result of subjecting broadband Internet access service providers to even *more* stringent duties than common carriers subject to Title II.[203]

Generally speaking, under Title II, discrimination by a common carrier is considered reasonable if there is a "neutral, rational basis" for the carrier's conduct.[204] Accordingly, differential treatment based on cost considerations historically has been found to be reasonable,[205] whereas discrimination motivated solely by anti-competitive considerations has been found to be unreasonable.[206] Moreover, where carriers are subject to competition, the courts have made clear that even Title II affords greater flexibility to differentiate among

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203 As discussed below, such an outcome would not only defy all common sense but would be unlawful. *See infra* Section II.B.3.

204 *Reservation Telephone Coop. v. FCC*, 826 F.2d 1129, 1136 (D.C. Cir. 1987); *see also National Ass'n of Regulatory Util. Comm'rs v. FCC*, 737 F.2d 1095, 1133 (D.C. Cir. 1984).

205 *See, e.g., Ameritech Operating Cos. Revisions to Tariff FCC No. 2*, Order, DA 94-1121 (CCB 1994) (ILEC's disparate rates to different customers may be justified based on cost savings from serving one customer versus another); *ACC Long-Distance v. Yankee Microwave, Inc.*, 8 FCC Rcd 85 (CCB 1993) (change in costs over time justified difference in pricing).

206 *See, e.g., Resale and Shared Use of Common Carrier Services and Facilities*, 60 F.C.C.2d 261 (1976), *aff'd sub nom. AT&T v. FCC*, 572 F.2d 17 (2d Cir. 1978) (volume discounts offered by AT&T to its end-users also must be made available to resellers).

customers.[207] Thus, in applying a ban on unreasonable discrimination in the broadband context, the Commission can and should take into account the "value [of] the free market, the benefits of which are well-established."[208] As noted above, absent evidence that a service provider's conduct is manifestly anti-competitive or otherwise harmful to consumers, the Commission should deem it reasonable, given the powerful disciplining effect of market forces. To the extent that the Commission imposes any restrictions that are not based on the improper exercise of market power, it should ground them in established precedent applicable to non-dominant common carriers, such as interexchange carriers or CMRS carriers.

A prohibition against "unreasonable" discrimination would be far from perfect, given the uncertain meaning of that modifier. The term "reasonable" can be an empty vessel, and so too can its corollary term "unreasonable" leave providers at sea. Applying these standards in the context of case-by-case adjudications, as the NPRM proposes to do, thus still poses the risk that liability will only be apparent after the fact. But at least there is an existing body of established precedent to draw on in this context, giving the Commission and service providers some basis for anticipating how practices will be evaluated and thus satisfying the NPRM's goal of providing "[g]reater predictability in this area."[209] Just as importantly, consistent with Commission procedures for evaluating complaints in other contexts, the burden would be on a complainant to demonstrate unreasonableness, which would provide some further measure of protection against

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207 *See Orloff v. FCC*, 352 F.3d 415 (D.C. Cir. 2003) (granting sales concessions selectively to customers of wireless service was a reasonable response to competitive market conditions, rather than unjust or unreasonable discrimination against similarly situated customers).

208 *Id.* at 421 (internal quotation marks and citation omitted).

209 NPRM ¶ 108.

arbitrary limitations on beneficial practices. Finally, a restriction on "unreasonable discrimination" would permit the beneficial practices discussed in the preceding section.

In short, the cumulative effect of this modified rule would be a model that more faithfully implements the "appropriately light and flexible policy" that is the NPRM's avowed goal. There is no way that a strict nondiscrimination requirement could be squared with that articulated objective.

3. Providers of Information Services Cannot Be Subject to a Stricter Discrimination Standard Than Providers of Telecommunications Services.

If the Commission were to adopt the proposed nondiscrimination requirement, it would produce an anomalous result that cannot be sustained as a legal or policy matter. The NPRM notes that this requirement resembles the "unqualified prohibitions on discrimination" added to Title II in 1996 in order to open up monopoly telephone markets to competition, as opposed to the more general provisions of section 202.[210] And the Commission has previously found that this "nondiscriminatory" standard is a "more stringent standard for prohibiting discrimination" than the traditional common carrier standard embodied in section 202.[211] Thus, the NPRM would import the most restrictive discrimination rule possible, which was developed to ensure the faithful execution of specific market-opening duties by monopoly providers, to apply in a context that is characterized by robust competition. In other words, absent the modification proposed above, the draft rules would subject information service providers to a far stricter legal standard than Congress has deemed appropriate to govern common carriers' general business

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210 *Id.* ¶ 109.

211 *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Notice of Proposed Rulemaking, 16 FCC Rcd 22781 ¶ 71 (2001) (citation omitted).

practices, even though many such carriers were or still are dominant providers with market power.

Creating a strict nondiscrimination requirement under Title I—which imposes no specific obligations at all—for providers of information services, when Congress established a more flexible standard allowing reasonable forms of discrimination even by monopoly telephone providers, would conflict with the basic structure and logic of the Act.[212] First, Congress did not see fit to impose any regulatory mandates on information service providers. Even assuming the Commission has ancillary authority to impose some form of regulation in the broadband arena, the requirements cannot be stricter than those Congress deemed appropriate for monopoly providers of telecommunications services. That would turn the fundamental regulatory structure established by Congress on its head. The disconnect is especially striking given the Commission's proposed reliance on section 201(b) as a basis for asserting ancillary authority,[213] and its assertion that "long-standing doctrines of common carriage . . . should inform policies for broadband Internet access service providers."[214] After sustained efforts to craft a regulatory regime for broadband services that is *more flexible* than Title II, the NPRM now seeks to leapfrog the core obligations in that title in favor of a *stricter* standard. Such a radical departure from precedent could not be sustained.[215]

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212 *See FCC v. Midwest Video Corp.*, 440 U.S. 689, 708-09 (1979) ("*Midwest Video II*") (striking down cable regulations imposed under Commission's Title I ancillary authority on the ground that rules were antithetical to the Act's basic regulatory parameters).

213 NPRM ¶ 84.

214 *Id.* ¶ 67.

215 *See, e.g.*, *Brand X*, 545 U.S. at 981 ("Unexplained inconsistency is . . . a reason for holding an interpretation to be an arbitrary and capricious change from agency practice under the Administrative Procedure Act."); *Wisconsin Valley Improvement Co. v. FERC*, 236 F.3d 738, 748 (D.C. Cir. 2001) ("[A]n agency acts arbitrarily and capriciously when it abruptly departs from a position it previously held without satisfactorily explaining its

Such a regime also would make no sense as a matter of policy. The Commission has expressly found that even Title II restrictions impede investment and innovation in the broadband arena, and it accordingly eliminated the *Computer Inquiry* requirements and other legacy rules for a series of services.[216] Even assuming that the Commission could compile record support to justify re-regulating broadband Internet access service providers formerly subject to such requirements—and imposing such requirements on cable operators for the first time—it would make no sense to abandon the time-tested Title II regime in favor of a more stringent nondiscrimination mandate. Even the most ardent pro-regulatory advocacy groups have limited themselves to espousing reclassification of broadband services as Title II services (*i.e.*, subject to a ban on unreasonable discrimination), rather than scrapping that regime in favor of something *more* restrictive.[217]

The NPRM suggests that "a bright-line rule against discrimination, subject to reasonable network management and enumerated exceptions, may better fit the unique characteristics of the

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reason for doing so."); *Food Marketing Institute v. Interstate Commerce Com.*, 587 F.2d 1285, 1290 (D.C. Cir. 1978) ("While agencies may not be bound under the doctrine of stare decisis to the same degree as courts, it is at least incumbent upon the agency carefully to spell out the bases of its decision when departing from prior norms.") (internal citations omitted).

216 *Wireline Broadband Order* ¶ 44 (finding that "the additional costs of an access mandate diminish a carrier's incentive and ability to invest in and deploy broadband infrastructure investment"). The Commission cited these same factors in relieving incumbent local exchange carriers of the obligation to offer to competitors unbundled access to fiber-to-the-home and fiber-to-the-curb loops. *Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978 ¶ 278 (2003), *aff'd in pertinent part, United States Telecom Association v. FCC*, 359 F.3d 554 (D.C. Cir. 2004); *see also Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Reconsideration, 19 FCC Rcd 20293 ¶ 9 (2004) (concluding that avoiding regulation of these facilities was "necessary to ensure that regulatory disincentives for broadband deployment are removed").

217 *See, e.g.*, Comments of Public Knowledge. GN Docket No. 09-51, at 23 (filed June 8, 2009); Comments of Free Press, GN Docket No. 09-51, at 261 (filed June 8, 2009).

Internet, which differs from other communications networks in that it was not initially designed to support just one application (like telephone and cable networks), but rather to allow users at the edge of the network to decide toward which lawful uses to direct the network."[218] That rationale fails utterly to justify a flat ban on charging application providers for prioritization, service enhancements, or other potentially beneficial forms of discrimination. Nothing in such arrangements would interfere with a user's direction as to the uses to which the network is put. And, if prioritization *were* seen as interfering with such user-directed management of the network (presumably on the theory that enhancing delivery of particular bits leaves other bits relatively worse off), then the use of CDNs and collocation techniques should be subject to the same restrictions, as they are practically indistinguishable from pricing models that achieve the very same selective enhancements for content, application, and service providers who pay for faster and higher-quality information delivery.[219]

For all of these reasons, the NPRM's proposed nondiscrimination requirement must be abandoned. While TWC continues to have serious concerns about subjecting broadband Internet access service providers to any aspects of common carrier regulation, a prohibition on "unreasonable discrimination" at least would afford some measure of flexibility under a well-developed body of law.

C. The Commission Should Clarify and Strengthen the Ability of Broadband Internet Access Service Providers To Conduct Reasonable Network Management.

The proposed rules in the NPRM, including any prohibition on discrimination, would be subject to allowing broadband Internet access service providers to conduct reasonable network

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218 NPRM ¶ 110.

219 As discussed further below, *see infra* Section II.D, this inconsistency demonstrates that the NPRM's singular focus on the practices of broadband Internet access service providers is unsustainable.

management.[220] Those proposed provisions reflect the widespread agreement—shared even by many proponents of net neutrality regulation—that network owners must be allowed to employ reasonable techniques to manage the ever-increasing flow of traffic over their networks.[221] The Commission further notes its desire that reasonable network management "be meaningful and flexible."[222] The proposed rules make some progress toward that end, but they do not provide sufficient clarity to facilitate reasonable network management.

1. The NPRM Recognizes the Importance of Permitting Network Management.

The Commission already has the benefit of a robust record establishing the importance of reasonable network management to address network congestion and other sources of performance degradation, and the case has only become stronger with time.[223] As described above, bandwidth utilization is exploding, due largely to the incredible growth of streaming video, P2P traffic, and similar latency-sensitive and bandwidth-intensive applications.[224] The FTC has stated that "the Internet's continued exponential growth and the proliferation of resource-intensive content and applications like video file sharing and the prospect of Internet Protocol television ('IPTV') may outstrip the Internet's current capacity and cause it to become significantly congested or crash altogether."[225] And while TWC and others have invested heavily in their networks and continue to do so, capacity upgrades alone are not sufficient to

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220 NPRM ¶ 137; *id.*, App. A § 8.3.

221 *See* TWC Net Neutrality Comments at 20-21.

222 NPRM ¶ 108.

223 *See, e.g.*, TWC Net Neutrality Reply Comments at 3-5 (describing other comments addressing the need for reasonable network management); TWC Net Neutrality Comments at 14-21.

224 *See supra* pp. 14-16.

225 FTC Report at 21.

safeguard consumers' online experience in an environment in which applications are designed to consume all available bandwidth and where traffic is growing exponentially.[226] That point was underscored recently at a Commission workshop focused on network management issues.[227]

Thus, network management will be essential to ensuring that Internet users can receive optimal performance from their broadband services. Absent active traffic management, TCP/IP will result in packet loss in a manner that unfairly penalizes all consumers, which is especially unfair to those who make less intensive use of bandwidth. As TWC has explained, packet-switching technology allows multiple users to share the same bandwidth without maintaining a dedicated channel for any single use, but such efficiency can be negated by applications that consume all of the available bandwidth.[228] As a result, all users may experience packet loss—not only the P2P user whose computer is engaging in dozens of simultaneous peering sessions, but also the subscriber pursuing far more limited uses of his or her broadband connection such as sending emails and doing simple Web browsing. Broadband Internet access service providers thus face the significant challenge of facilitating the use of these valuable applications while also seeking a fair allocation of shared resources. One means of addressing that dilemma that the Commission acknowledges (and seeks comment on) would be to allow such providers to bill subscribers based on usage, as noted above.[229] But particularly where service plans do not bill based on usage, basic principles of fairness require managing bandwidth allocation during

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226 *See supra* pp. 16-18.

227 *See* Adam Bender & Yu-Ting Wang, *ISPs Can't Build Way Out of Network Congestion, FCC Told*, COMMUNICATIONS DAILY, Dec. 9, 2009, at 2-3.

228 TWC Net Neutrality Comments at 11-13; *see also supra* pp. 16-18.

229 NPRM ¶ 137.

periods of congestion to prevent a small number of disproportionately heavy users from unduly degrading others' performance.[230]

The NPRM generally recognizes the importance of permitting network management, and it helpfully acknowledges the propriety of actively managing traffic in the interest of ameliorating congestion.[231] But the NPRM appears to misapprehend the scope of the challenges. In particular, the NPRM appears most sympathetic to the need for wireless broadband Internet access service providers to manage their spectrum-constrained services, recognizing that the sharing of bandwidth among service groups poses significant challenges.[232] For example, the NPRM observes that "[t]he number of users in a cell share the spectrum at any given time and the demands on capacity can vary widely depending on such factors as the number of users within that cell and the applications they are using."[233] That is undoubtedly true, but the NPRM somehow overlooks the fact that the very same challenges affect other types of broadband networks, including cable and other wireline networks.[234] For example, cable operators, no less

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230 FTC Report at 28-29 (noting that as a result of the enormous consumption of bandwidth caused by P2P applications, many experts "believe that the use of such applications by even a small portion of Internet users may effectively degrade service for the remaining majority of end users").

231 *See, e.g.*, NPRM ¶ 133.

232 *See id.* ¶¶ 154-74.

233 *Id.* ¶ 172.

234 *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, Third Report and Order and Third Notice of Proposed Rule Making, 22 FCC Rcd 21064 ¶ 60 (2007) (noting the capacity constraints faced by cable operators); *Oceanic Time Warner Cable, a division of Time Warner Cable, Inc.; Oceanic Kauai Cable System*, Order on Review, File No. EB-07-SE-352, at ¶ 10 (rel. June 26, 2009) (noting the capacity constraints that result from the traditional broadcast-type technologies used by cable systems); Comments of Time Warner Cable Inc., GN Docket No. 09-51 *et al.*, at 2-3 (filed Nov. 4, 2009) (explaining that in contrast to common carriers that design their facilities with excess capacity that can be leased to and used by third parties, cable operators originally deployed their cable systems exclusively to

than wireless carriers, operate using a finite amount of capacity and have service groups that share the available bandwidth on a node-by-node basis. As in the wireless context, network performance within each node depends entirely on the number of users and the types of applications they are running. Excessive usage by one customer can have a dramatic impact on the performance experienced by other users within the same node. Accordingly, other broadband Internet access service providers should receive the same flexibility when it comes to network management that the NPRM appears to envision for wireless providers.

2. The Commission Should Eliminate the Circularity In Its Proposed Definition of Reasonable Network Management.

Recognizing the need for network management is one thing; protecting the ability of network owners to engage in it is quite another. Aspects of the NPRM's proposal to ensure the necessary flexibility are more promising than the Commission's prior treatment of the subject. In particular, disavowing the indefensible strict scrutiny standard applied in the *Comcast Network Management Practices Order* is an important and commendable step forward.[235] And the apparent willingness to create presumptive safe harbors, including a "catch-all" specifically intended to capture methods and techniques that cannot yet be anticipated, reflects an understanding of both the importance of allowing network owners to experiment and the difficulty in predicting how they might do so to address future challenges.[236]

But the proposed rules do not go nearly far enough in creating certainty and predictability for broadband Internet access service providers seeking to manage their networks in a manner

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support their own cable television services, resulting in acknowledged capacity constraints).

235 NPRM ¶ 137. The Commission had previously determined that a practice could be deemed "reasonable" only if the broadband Internet access service provider could prove that it "further[ed] a critically important interest" and was "narrowly or carefully tailored to serve that interest." *Comcast Network Management Practices Order* ¶ 47.

236 NPRM ¶ 140.

that benefits their subscribers and poses no threat to competition. The NPRM proposes to define "reasonable network management" to consist of those practices that are themselves "reasonable."[237] The circularity of this approach leaves broadband Internet access service providers vulnerable to subjective, post-hoc judgments of "unreasonableness" that they cannot possibly anticipate. Service providers require concrete guidance concerning which practices they may or may not undertake.

The inherent malleability of the "reasonableness" qualifier is unworkable in this context, where service providers must respond to rapid changes in Internet usage that affect their subscribers' experience. In contrast to the common carrier precedent regarding *pricing* practices, there is no existing body of precedent to supply any guidance as to how the Commission would evaluate a particular network management tool. Indeed, if the proposed definition had been in place when Comcast implemented the P2P-mitigation technique at issue in the *Comcast Network Management Practices Order*, it still would have been impossible to predict whether that protocol-specific tool was permissible. On the one hand, that practice was intended to ease network congestion in the interest of preventing service degradation for most customers, as the proposed rule suggests is reasonable. On the other hand, the general qualification that congestion-management tools themselves must be reasonable would make it anyone's guess as to whether Comcast's targeted approach would pass muster. Thus, the proposed definition would leave providers with no more guidance than they have today.

The consequence of that uncertainty would be to continue chilling the use of *any* network management techniques, with consequent risks to broadband performance capabilities.

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[237] NPRM, App. A, § 8.3 (draft definition, providing that "[r]easonable network management consists of . . . "(a) reasonable practices employed" to achieve certain enumerated goals, and "(b) other reasonable network management practices").

Implementing traffic management tools requires a substantial investment of time and money, particularly where they entail the acquisition and deployment of new network equipment. If the Commission prohibits "discriminatory" conduct as discussed above while purporting to allow "reasonable"—but still largely undefined—network management practices, it will almost certainly block the deployment of practices that benefit consumers, as the threat of unpredictable *post-hoc* determinations of *un*reasonableness remains too great absent more concrete guidance.

Accordingly, the Commission should delete the modifier "reasonable" in subsection 8.3(a) of the definition, which seeks to identify categories of network management practices that will be considered permissible, and either develop safe harbors for providers relying on traffic management practices, or specify which practices it considers unreasonable. For example, based on the categories discussed in the NPRM and the accompanying discussion, the Commission might amend draft section 8.3 of the proposed rules to provide that reasonable network management consists of:

> (a) any practice employed to:
>
> (i) reduce or mitigate the effects of congestion on the network or to address quality-of-service concerns;
>
> (ii) address traffic that is unwanted by users or harmful;
>
> (iii) prevent the transfer of unlawful content;
>
> (iv) prevent the unlawful transfer of content; or
>
> (b) any other network management practice that is intended to improve service quality or performance rather than to achieve any anti-competitive objective.[238]

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[238] While the NPRM's discussion of reasonable network management suggests that the "singling out of any particular content" should be considered *per se* unreasonable, NPRM ¶ 137, such a restriction would violate the First Amendment—and needlessly so. As discussed above, broadband Internet access service providers' First Amendment protection is strongest when it comes to the exercise of editorial discretion in connection

Such an approach would reflect the apparent intent underlying the NPRM to permit network management for the benefit of consumers, while eliminating the substantial uncertainty that would result from a further *post-hoc* "reasonableness" screening. The final prong, which would distinguish beneficial "discrimination" from practices that are manifestly anti-competitive, would be consistent with the above proposal to prohibit only *unreasonably* discriminatory practices, rather than adopting a rigid requirement of "nondiscrimination."[239] At a minimum, the Commission should establish such categories as presumptively reasonable, imposing a heavy burden on complainants to demonstrate that such network management practices in fact are anti-competitive and thus should be deemed unreasonably discriminatory.

In addition, as reflected in the proposal to permit blocking of "unwanted" traffic,[240] any form of "discrimination" of which consumers expressly approve should likewise be deemed reasonable. Thus, the Commission should confirm that broadband Internet access service providers are permitted to develop new products and categories of services that entail limitations on access to certain services or content, such as pornography, at the customer's direction.[241] By the same token, if a provider wanted to introduce a service that limits or blocks P2P transmissions—say, because a parent wants to ensure that a child does not download pirated content or wants to ensure that excessive P2P traffic does not impair the use of other Internet services in the household—then such practices should be considered *per se* reasonable as long as

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with the transmission of particular content or viewpoints. *See supra* p. 45. In any event, there is no basis for the Commission to address content discrimination, as there is no support for the proposition that service providers will block or de-prioritize particular messages based on their content or viewpoint.

239 *See supra* Section II.B.

240 NPRM ¶ 138 (proposing that broadband Internet access service providers be permitted to "address harmful traffic or traffic unwanted by users," including malware and spam).

241 *Id.* ¶ 138.

a subscriber expressly approves of them. While the NPRM appropriately identifies usage-based billing as a legitimate way to manage congestion,[242] broadband Internet access service providers must have flexibility to employ a wide variety of tools, including not only retail pricing strategies but restrictions that consumers can opt into in the interest of customizing their Internet experience. There is no way to predict what types of customized services consumers will demand, but the Commission should eliminate any doubt about the validity of network management practices that are tailored to consumer preferences.

D. Any New Rules Must Apply to All Entities That Could Undermine Internet Openness.

As discussed above, despite paying lip service to the importance of casting a broad net, the reach of the proposed rules is unjustifiably narrow.[243] The NPRM focuses exclusively on broadband Internet access service providers, without acknowledging that other entities have a comparable or greater ability to affect Internet openness.[244] As a result, practices that would be permissible for these entities under the NPRM's proposed framework would be *per se* violations of Commission rules if undertaken by broadband Internet access service providers. Such differential treatment would be arbitrary and capricious. To better ensure that any regulatory framework it adopts is effective, fair, and lawful, and to best serve consumers, the Commission should modify the scope of any rules that it ultimately adopts to treat all marketplace participants comparably.

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242 *See, e.g.*, *id.* ¶ 137 (noting, as a potential example of reasonable network management, that "a broadband Internet service provider might seek to manage congestion by limiting usage or charging subscribers based on their usage rather than a flat monthly fee").

243 *See supra* Section I.C.

244 *See* Tribe & Goldstein at 2.

1. Various Entities Other Than Broadband Internet Access Service Providers Can Undermine Internet Openness and May Already Be Doing So.

A number of participants in the Internet ecosystem have the potential ability to act as "gatekeepers." Indeed, in contrast to broadband Internet access service providers, some are acting on that potential in a manner that, notwithstanding any benefits they may offer consumers, appears inconsistent with the principles espoused in the NPRM. Any effort to regulate in this area must take account of this conduct. This is not to say that these practices are in fact unlawful, or that they should be declared to be so in this proceeding. Rather, however the Commission may assess such conduct, it must either permit or prohibit it as to all parties. Particularly given the absence of any finding of market power or other unique attributes, broadband Internet access service providers cannot lawfully be subject to differential treatment.

a. Application Providers

Several application behemoths are among the staunchest supporters of net neutrality regulation, but ironically, much of their conduct appears inconsistent with the principles of openness that they espouse. Most notably, Google has led the charge to adopt regulation to ensure Internet openness, yet it has the ability and incentive to engage in a range of decidedly non-neutral conduct due to its control over so many aspects of the Internet experience. If the NPRM were correct that the mere existence of such incentives is sufficient to justify regulatory intervention, then Google necessarily should find itself in the Commission's crosshairs—yet the NPRM would insulate it from such scrutiny. When confronted with that uncomfortable reality, Google seeks to dodge the consequences with the suggestion that it can be trusted not to exploit its dominant position. Of course, if that were true for Google, it would certainly be true for broadband Internet access service providers that do not enjoy anywhere near the same level of dominance. But in any event, Google fails to live up to its own promise, instead acting in ways

that threaten "openness" far more than anything a broadband Internet access service provider has ever done.

Google has become a force in the Internet ecosystem. It not only provides the dominant search application,[245] but it also has a major role in providing access to online books, maps, and many other services. Importantly, categorizing Google merely as an "application" provider would not adequately describe the full extent of its activities in the Internet ecosystem. In fact, Google is not merely a gatekeeper to search and online advertising; it plays a significant gatekeeper role with respect to the Internet more generally. In addition to providing online applications, Google has assumed other functions traditionally associated with ISPs. Recently, Google introduced its own public Domain Name System ("DNS") resolver service, which is used to convert domain names into IP addresses in order to permit communications between computers.[246] By launching its "Google Public DNS" service, Google expressly seeks to assume a core function normally provided by ISPs.[247] Google's purpose in launching its DNS resolver service is to "make the web faster"—at least, for those users who set up Google Public DNS on

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245 In December 2007, nearly 60 percent of all U.S. online searches were conducted on Google or one of its related sites. DIGITAL ECONOMY FACT BOOK at 12. In May 2008, more than 75 percent of all U.S. Internet users visited a Google site. *Id.* at 8. Google, together with Yahoo!, accounted for 91.9 of the total U.S. paid search advertising spending in 2007, up from 50.3 percent in 2004. *Id.* at 12. By one account, Google now accounts for six percent of all Internet traffic globally. C. Labovitz *et al.*, ATLAS Internet Observatory 2009 Annual Report 18 (2009).

246 Google, *Introducing Google Public DNS*, Dec. 3, 2009, http://googleblog.blogspot.com/2009/12/introducing-google-public-dns.html.

247 *Id.* (stating that DNS is "often handled automatically by [an] Internet Service Provider"); *see also Brand X*, 545 U.S. at 981 (noting that "DNS is essential to providing Internet access").

their computers or routers.[248] Through such an offering, Google further blurs the lines between itself and broadband Internet access service providers.

In addition, Google owns or controls and operates extensive infrastructure—including servers, routers, and transmission facilities. This combination gives Google significant leverage over broadband Internet access service providers and substantial opportunities to obtain preferential terms for the transport of its traffic. Google is seeking such preferential treatment with its recent request to collocate Google servers at broadband Internet access service providers' system head-ends in order to reduce transmission time for Google's content—a move that the *Wall Street Journal* described as "a proposal to create a fast lane for [Google's] own content"[249]—and, for that matter, for any third-party content Google may store on its servers.

Like CDNs, Google's collocation proposal would involve edge caching, which reduces backbone traffic and provides faster delivery to users. But Google would take the CDN model a step further—and a step further away from the NPRM's ideal of Internet openness—to the extent Google's edge servers would cache *its own* content, making it more readily accessible than the content of its competitors. A smaller application provider without Google's vast resources would not have access to such preferential transmission and thus would be at a disadvantage in delivering content to users. This kind of business practice by Google therefore creates structural disadvantages and entry barriers for the very entrepreneurs that Google purportedly seeks to protect by advocating selective net neutrality requirements for broadband Internet access service providers. Indeed, as discussed above, a key consequence of the proposed ban on consensual arrangements that entail charges to application providers for service enhancements would be that

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248 *See Using Google Public DNS*, http://code.google.com/speed/public-dns/docs/using.html ("When you use Google Public DNS, you are changing your DNS 'switchboard' operator from your ISP to Google Public DNS.").

249 Kumar & Rhoads, *Google Wants Its Own Fast Track on the Web*, *supra*.

new entrants would be denied that efficient means of leveling the playing field with Google.[250] In this regard, Google's enthusiasm for selective net neutrality regulation can be viewed only as an attempt to seek governmental protection of the barriers it has already put in place.

Google's non-neutral business practices range far beyond its attempt to create private fast lanes for its traffic and arise at various points at which Google has a gatekeeper function. Among the many other examples are the following:

- Google's core search application relies on a pay-for-priority scheme that is squarely at odds with its proposed neutrality requirements for broadband Internet access service providers. Among other aspects of this system, Google's paid search slots are auctioned off using Google's AdWords system, which assigns a "quality score" to each advertiser participating in the auction and then determines the advertiser's "Ad Rank" based on its bid for a keyword and its website's quality score.[251] By increasing its quality score, an advertiser can earn a higher Ad Rank, and therefore better ad placement, than a competitor that has been assigned a lower quality score by Google.[252] Particularly because significant components of the Ad Rank scheme are subjective and not based on "neutral" factors, this approach further increases Google's significant gatekeeper role and

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250 *See supra* p. 55.

251 Through this system, Google effectively is able to dictate the nature of significant amounts of content that is available on the Internet. In particular, the components of the quality score take into account several factors, including the relevancy and quality of the website, *as determined by Google*. Google AdWords, *What is 'Quality Score' and how is it calculated?, available at* http://adwords.google.com/support/aw/bin/answer.py?hl=en&answer=10215. In other words, through its assignment of the quality score, Google uses its leverage to dictate to websites the editorial and business choices they must make.

252 *Id.*

limits both the content users can reach as well as the content that content and application providers can create.

- Compared to broadband Internet access service providers' conduct, the implications of such non-neutral search prioritization are far more significant for the investment and innovation, competition, and "speech and civic participation" goals set forth in the NPRM,[253] as an individual's ability to be found or heard online often depends on Google's search results. As leading commentators have observed, "[t]hough search engines cannot prevent direct access to a site of interest, an exclusion from a search engine may nonetheless have a similar effect on a site's ability to reach its intended visitors."[254] A recent article likewise noted: "If Google delivers a search result in the top position, we click on it. If it's buried, the site might as well not exist."[255] And Google has made clear that it intends to actively employ its gatekeeper power to advance its own ends. As Google's Senior Vice President Jonathan Rosenberg pointedly stated,

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253 *See* NPRM ¶¶ 62-78.

254 Jonathan Zittrain & Benjamin Edelman, *Localized Google Search Result Exclusions*, Berkman Center for Internet & Society, Harvard Law School (last updated Oct. 26, 2002), *available at* http://cyber.law.harvard.edu/filtering/google/. An April 2008 study found that 68 percent of search engine users do not look beyond the first page of search results and 92 percent click on a result within the first three pages. DIGITAL ECONOMY FACT BOOK at 12.

255 Jia Lynn Yang & Nina Easton, *Obama & Google (a love story)*, FORTUNE, Oct. 26, 2009, *available at* http://money.cnn.com/2009/10/21/ technology/obama_google.fortune/ index.htm?section=magazines_fortune.

"We won't (and shouldn't) try to stop the faceless scribes of drivel, *but we can move them to the back row of the arena*."[256]

- Google's self-serving claim that its search business should be treated differently from other Internet-related businesses does not withstand scrutiny. Google claims entitlement to such preferential treatment because it operates in "highly competitive" markets and because applying openness principles to "search and ad products" "would allow people to 'game' our algorithms to manipulate search and ads quality rankings, reducing our quality for everyone."[257] First, Google's claim of competition among search engines is highly dubious. As noted, Google clearly dominates that sector, and its claim that it is always "one click away from losing you as a customer" obscures the fact that its real customers are advertisers who lack any viable alternative[258]—a reality that Google has preserved by erecting the entry barriers described herein. Further, it is unclear why that reasoning should supply a convenient exemption from openness for Google but not for other entities for whom the same points are even more compelling. In particular, broadband Internet access service providers compete fiercely with one another for

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256 Jonathan Rosenberg, *From the Height of This Place*, The Official Google Blog (Feb. 16, 2009) (emphasis added), *available at* http://googleblog.blogspot.com/2009/02/from-height-of-this-place.html.

257 Jonathan Rosenberg, Senior Vice President, Product Management, *The Meaning of Open*, Dec. 21, 2009, http://googleblog.blogspot.com/.

258 Scott Cleland, *What is "one click away?"*, THE PRECURSOR BLOG, June 22, 2009, http://precursorblog.com/content/what-one-click-away; *see also* David Carr, *How Good (or Not Evil) Is Google?*, N.Y. TIMES, June 22, 2009.

customers, and they compete with application providers in many respects (and could explore new ways to compete with CDNs, backbone providers, and others, depending on the outcome of this proceeding). In such an environment, selective neutrality requirements would allow companies such as Google to game the system in anti-competitive ways,[259] just as it worries would occur if neutrality principles were applied to its own services. Google's self-awarded exemption from openness principles is more troublesome in light of its financial incentives to violate them. Because Google's search methodology rewards those who pay more, Google has every incentive to maximize the payments its receives, including by ensuring that "unpaid" search is a distant second choice and preventing the use of applications that would block the paid-for advertisements on which its business relies.

- Relatedly, Google recently indicated that it retains the prerogative to block ad-blocking programs that could imperil an important source of its revenue.[260] Though Google does not yet appear to have exercised this right (publicly asserting a somewhat ironic faith in market forces to address any problems with unwanted advertising[261]), its obvious financial incentives could lead it to do so at any time, while broadband Internet

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259 *See, e.g., infra* p. 95.

260 Noam Cohen, *In Allowing Ad Blockers, a Test for Google*, N.Y. TIMES, Jan. 3, 2010.

261 *See id.*

access service providers would not have the option even though the impact on consumers would be precisely the same.

- Google's search methodology also systematically favors Google-affiliated content in ways that appear to strike at the heart of the NPRM.[262] By contrast, Google awards lower quality scores—which translate into slower load times—to websites that retain more advertising revenue for their publishers (thus preventing Google from capturing such revenues).[263] In fact, from the time that Google's search

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262 *See, e.g.*, Scott Cleland, *Why Google Is Not Neutral*, The Precursor Blog (Nov. 4, 2009), *available at* http://www.precursorblog.com/content/why-google-is-not-neutral. *See also* Scott Cleland, *Google's Search Engine Discriminates in Favor of New York Times – per Ken Auletta, "Googled" author*, The Precursor Blog (Nov. 11, 2009) (discussing Google's secret algorithm, which not only favors sites based on the "wisdom of the crowds," as expressed through more traffic and links, but also elevates within its search results sites it deems authoritative, like the *New York Times*); Scott Cleland, *New evidence of Google search bias – It's relevant to DOJ investigation of Google-Yahoo ad-deal*, The Precursor Blog (Aug. 14, 2008) (noting that Google-owned affiliate sites routinely receive top placement among search results, ahead of competitors with greater online market share and popularity, despite Google's representations that it does not skew search results), *available at* http://www.precursorblog.com/content/new-evidence-google-search-bias-its-relevant-doj-investigation-google-yahoo-ad-deal.

263 *See* Cleland, *Why Google Is Not Neutral* ("Those who don't design their websites the way Google wants, but the way that is most profitable for publishers (i.e. collecting revenue from display ads on their most viewed landing page)—will be discriminated against unless and until they re-design their web-pages to favor Google's search-dominant business model over the more competitive display advertising model."), *available at* http://www.precursorblog.com/content/why-google-is-not-neutral. Moreover, with limited exceptions, Google does not permit paid websites to be searched, thereby interfering with the business models of certain content providers. At least one Google competitor has filed a lawsuit alleging anti-competitive bias in Google's search results. *See* Summons and Complaint, *TradeComet.Com LLC v. Google Inc.*, Case No. 09-CIV-1400 (S.D.N.Y. Feb. 17, 2009). The Department of Justice was hours away from filing an antitrust lawsuit based on Google's proposed search advertising deal with Yahoo! until the Google-Yahoo deal was abandoned. Ina Fried, *Report: DOJ was hours from filing Google suit*, CNET News.com (Dec. 3, 2008), *available at* http://news.cnet.com/8301-10805_3-10112761-75.html. Several other lawsuits have recently been filed against Google alleging trademark infringement and related claims by Google's AdWords service. *See, e.g.*, *Rosetta Stone Ltd. v. Google, Inc.*, 1:09-cv-00736-

application was on the drawing board, its founders recognized that "advertising funded search engines will be *inherently biased* towards the advertisers and away from the needs of the consumers."[264] To the extent that broadband Internet access service providers would be barred from engaging in *any* discrimination, regardless of whether it would harm competition or consumers, it is difficult to comprehend how such inherent bias could be deemed *per se* permissible when undertaken by Google. This is particularly so given Google's market power in the area. One of Google's nearly vanquished competitors recently explained in the *New York Times* that Google enjoys "a virtually unassailable competitive advantage" through its "domination of the global search market" and ability to prioritize its own services in its search results.[265] The author called for a requirement of "search neutrality" as a result. Whatever the merits of such a proposal, such leveraging of market power to dictate who can and cannot be found on the Internet would appear to be the worst kind of offense under the theory animating the NPRM, yet when such conduct is perpetrated by Google, the proposed rules categorically would not apply.

GBL-JFA (E.D. Va. complaint filed July 10, 2009); *Jurin v. Google, Inc.*, CV 09-03934 (C.D. Cal. complaint filed June 2, 2009). These lawsuits reflect Google's immense market power in Internet search and the possible abuses of that power.

264 Sergey Brin & Lawrence Page, *The Anatomy of a Large-Scale Hypertextual Web Search Engine* (Appendix A) (emphasis added), *available at* http://infolab.stanford.edu/~backrub/google.html. Google now derives 97 percent of its revenue from advertising. *See* Yang & Easton, *Obama & Google (a love story)*, *supra*.

265 Adam Raff, *Search, But You May Not Find*, N.Y. TIMES, Dec. 28, 2009.

- Additionally, Google has acknowledged its discriminatory practices in routing calls placed by Google Voice customers.[266] In fact, Google blocks calls placed to numbers in some rural areas and numbers associated with certain chat lines or free conference services that entail high intercarrier compensation payments, even though regulated telecommunications carriers—which are bound by the Title II prohibitions against unjust and unreasonable discrimination—must complete such calls irrespective of cost.[267] Needless to say, such blocking by broadband Internet access service providers would never be permitted under the rules proposed by the NPRM. Ironically, in response to AT&T's public criticism regarding Google's clear violation of Internet openness principles, Google accused AT&T of attempting to misuse the regulatory process to stifle innovation,[268] a remarkable assertion from a company advocating selective neutrality requirements that would not-so-coincidentally cement the enormous marketplace advantages it currently enjoys.

- Google Sidewiki, a new feature launched by Google in September 2009, is another example of Google's ability to use its market power to limit Internet

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266 Richard Whitt, *Sex, Conference Calls, and Outdated FCC Rules,* Google Public Policy Blog (Oct. 9, 2009), *available at* http://googlepublicpolicy.blogspot.com/2009/10/sex-conference-calls-and-outdated-fcc.html.

267 *See* Letter of Richard S. Whitt, Washington Telecom and Media Counsel, Google Inc., to Sharon Gillett, Chief, Wireline Competition Bureau, at 6 (Oct. 28, 2009) (acknowledging that Google refuses to connect calls to certain numbers and stating that "Google has the right to restrict calls or connections to any telephone numbers in its sole discretion"), *at* http://www.google.com/googleblogs/pdfs/google_voicecallrestrictions_102809.pdf.

268 Richard Whitt, *Response to AT&T's letter to FCC on Google Voice,* Sept. 25, 2009, http://googlepublicpolicy.blogspot.com/2009/09/response-to-at-letter-to-fcc-on-google.html.

openness and to confer substantial competitive advantages on Google vis-à-vis other website operators that rely on advertising revenue. This feature creates a browser sidebar where any user can read and write entries alongside any webpage.[269] But this comments section is accessible and viewable only by people who use the Google Toolbar and is an alternative to commenting within the dedicated sections contained on many blogs and other websites for that purpose. Unlike the comments section of a webpage, however, the operator of the webpage cannot control the content displayed by Sidewiki. As one well-known blogger has pointed out, this not only bifurcates the conversation on any blog by dividing the comments between those posted on the blog and those posted on Sidewiki, but, by taking comments away from the blog and consolidating them onto Google instead, it also centralizes content away from the edge, reducing website owners' ability to manage content posted in connection with their own sites.[270] Similarly, the website operator cannot prevent the siphoning of advertising revenues caused by the Sidewiki commentary connected with its site.

- The Google Book Settlement proposal likewise illustrates Google's non-neutral business practices. According to the Department of Justice in its recommendation that the court reject the settlement, the proposed settlement granted Google *de facto* exclusive rights for the digital distribution of millions of orphan works, providing Google with an unfair advantage over its competitors whose databases

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269 Sundar Pichai & Michal Cierniak, *Help and learn from others as you browse the web: Google Sidewiki*, The Official Google Blog (Sept. 23, 2009), *available at* http://googleblog.blogspot.com/2009/09/help-and-learn-from-others-as-you.html.

270 Jeff Jarvis, *Google Sidewiki: Danger*, Buzz Machine (Sept. 23, 2009), *available at* http://www.buzzmachine.com/2009/09/23/google-sidewiki-danger/.

would not have access to these works.[271] Google's effort to block competitors from accessing content which Google digitized without permission from copyright holders is inconsistent with the principles of neutrality contained in the NPRM and espoused by Google.

- A final illustration of Google's non-neutral practices—and of its ever-expanding role in the communications space—involves its recent launch of the Nexus One phone. Google markets the Nexus One exclusively through its own website, thereby leveraging its dominant position with respect to search; in fact, at times, the only advertisement on Google's famous blank homepage has been an advertisement for the Nexus One phone.[272]

These illustrative examples demonstrate that the selective regulation of broadband Internet access service providers both would be wholly unjustified and would have the perverse result of further entrenching Google's market power. But Google is not the only entity contemplating business practices that would be inconsistent with principles of Internet openness. A prominent example of the inconsistent appetite for openness concerns the ongoing negotiations between Microsoft and News Corp., owner of several newspapers including the *Wall Street Journal* and the United Kingdom's *The Sun*, regarding an agreement by which Microsoft would

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271 Statement of Interest of the United States of America Regarding Proposed Class Settlement, *The Authors Guild, Inc. et al. v. Google Inc.*, No. 05-civ-8136 (DC), at 23 (S.D.N.Y. statement filed Sept. 18, 2009), *available at* http://www.usdoj.gov/atr/cases/f250100/250180.pdf. The settlement proposal also would have allowed Google to incorporate out-of-print works into new commercial products without the owner's permission. *Id.* at 8.

272 http://www.google.com (as displayed on at least January 8, 2010).

pay News Corp. to remove its content from Google's search engine.[273] Microsoft executives have expressed an intent to pursue bold measures to boost traffic on Microsoft's rival search engine, Bing, launched in June 2009, and to disrupt Google's search market dominance.[274] However, this conduct has been described as "creat[ing] *a new set of barriers* for users to navigate" *and as* "hostile to the traditions of Internet culture."[275] While Microsoft has been coy about its intentions after the negotiations were publicized,[276] Google has nonetheless responded by updating its system to allow publishers of paid sites to limit readers arriving via Google to click through to no more than five free articles per day without registering or subscribing to the website.[277]

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273 Matthew Garrahan *et al.*, *Microsoft and News Corp Eye Web Pact*, FINANCIAL TIMES Nov. 22, 2009, *available at* http://www.ft.com/cms/s/0/a243c8b2-d79b-11de-b578-00144feabdc0.html. Additionally, "the *Financial Times* has learnt that Microsoft has also approached other big online publishers to persuade them to remove their sites from Google's search engine." *Id.*

274 *Id.*; Tim Arango & Ashlee Vance, *News Corp. Weighs an Exclusive Alliance with Bing*, NEW YORK TIMES, Nov. 24, 2009, at B1. Microsoft has also signed a deal with Yahoo to take over Yahoo's technology infrastructure and create a partnership in Internet search and advertising with the intent of forming a stronger rival to Google. *Id.*

275 *Id.*

276 Richard Waters, *Microsoft Plays Down Anti-Google Search Plans*, FINANCIAL TIMES, Dec. 3, 2009, *available at* http://www.ft.com/cms/s/0/87842678-df9f-11de-98ca-00144feab49a.html. Despite Microsoft's understandable downplaying of these reported initiatives, their existence may go a long way toward explaining why Microsoft abandoned its earlier advocacy in favor of net neutrality regulation.

277 Josh Cohen, *Google and Paid Content*, Google News Blog, Dec. 1, 2009, *available at* http://googlenewsblog.blogspot.com/2009/12/update-to-first-click-free.html. Previously, users were not limited in the number of pages they could access through Google on a subscription or registration-required site. *Id.* Publishers of websites requiring subscription or registration must participate in this "First Click Free" program in order to be included in Google's index and appear in Google search results. Google justifies its program as a means of preventing "cloaking," which it describes as "showing one web page to the crawler that indexes it but then a different page to a user." *Id.* While Google's First Click Free program may entail certain benefits, it is discriminatory in that it prevents a publisher's subscription or registration-required content from being

Amazon is another leading proponent of selective regulation to "protect the longstanding, fundamental openness of the Internet."[278] Yet the broadband service it offers in conjunction with its Kindle readers is difficult to square with the spirit, and possibly the letter, of the NPRM's proposed rules. Kindle is a "walled garden" service that provides access only to the Amazon bookstore and other limited content, including a dictionary, a basic web browser, and newspaper and magazine subscriptions. It operates independently of a computer and allows users to buy and download books and Kindle content through a dedicated wireless delivery system, the cost of which is completely subsidized for the end user by Amazon.[279] Amazon has also arranged with Sprint for faster, dedicated downloading service for Kindle.[280] As currently formulated, the proposed rules would bar broadband Internet access service providers from making similar editorial choices or providing similar expedited downloading. Regardless of whether Amazon is considered a broadband Internet access service provider for purposes of these rules, there is no sound rationale that would enable it to offer walled-garden services as long as other providers of broadband Internet access service are barred from doing so.

Recently, Facebook joined the ranks of application providers that disregard the neutrality principles proposed by the NPRM. It announced that it had begun to block an application that allows users to sign out permanently from social-networking services, including Facebook,

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discovered through Google unless the publisher participates in Google's First Click Free program or paid search results program.

278 Kumar & Rhoads, *Google Wants Its Own Fast Track on the Web*, *supra* (citing a statement by Amazon).

279 *See* Product Description for Kindle Wireless Reading Device, *available at* http://www.amazon.com/Kindle-Wireless-Reading-Device-Display/dp/B00154JDAI.

280 *Id.*

Twitter, and MySpace.[281] Of course, preventing a third-party application from effecting the cancellation of a Facebook account preserves Facebook's ability to maintain advertising revenue, but it also directly interferes with consumer choice. Again, putting aside the value of a third-party application like the one Facebook is blocking, this incident further illustrates the extent to which other entities can and do engage in conduct that would seem to be inconsistent with the principles addressed by the NPRM.

P2P providers likewise act in ways that are inconsistent with the NPRM. P2P providers shift costs from content owners to broadband Internet access service providers in ways that the latter group would be forbidden from doing under the proposed rules. P2P software turns users' computers into servers to distribute content, thus reducing the costs of backbone connectivity for the content provider. As TWC has explained, P2P software is designed to consume all available bandwidth, thus granting itself priority over other traffic. Since almost all users today pay a flat service rate, the cost of this consumption is ultimately borne by the broadband Internet access service provider.[282] Such providers must finance the development and maintenance of sufficient infrastructure to accommodate the heavy bandwidth requirements created by peer-to-peer traffic, but under the proposed regulations, cannot develop and charge for their own similar fast lanes.

b. Content Delivery Networks

CDNs, a relatively recent addition to the Internet ecosystem, are dedicated collections of strategically and geographically dispersed servers that maintain cached copies of content and

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281 *See* Rafe Needleman, *Facebook cuts off Suicide Machine access*, Jan. 4, 2010, *at* http://news.cnet.com/8301-19882_3-10424683-250.html.

282 *See* Prepared Remarks of Brett Glass, Owner and Founder of LARIAT, an ISP serving Laramie and Albany County, Wyoming, Delivered at the FCC *en banc* hearing on network management practices, Stanford University (Apr. 17, 2008), *at* http://www.brettglass.com/FCC/remarks.html.

services retrieved either upon a request or proactively from publishers and providers.[283] CDNs reduce traffic loads, transport costs, and latency by shifting traffic patterns and allowing more content and services to be accessed locally through the CDNs caches, rather than directly from the URL each time the same content is requested.[284] They are able to take into account topological proximity, the load on various servers, and network congestion when dynamically managing traffic and determining to which server a request by an end user will be redirected.[285] CDNs thus can play a positive role in mitigating the problems of congestion and latency on the Internet. They also can benefit end users not just by facilitating more efficient access to content, but through the cost savings made possible by less expensive transport.[286]

These benefits, however, are not available to all comers. Content providers contract with commercial CDNs to host and distribute their content through the CDNs' infrastructure. Akamai, one of the largest CDNs, recently explained to the Commission that it "provides caching and related services to content and application providers" that "enable content and

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283 Dave Clark *et al.*, *The Growth of Internet Overlay Networks: Implications for Architecture, Industry Structure and Policy* 16 (Sept. 8, 2005) (unpublished manuscript, presented at the 33rd Research Conference on Communication, Information and Internet Policy), *available at* http://web.si.umich.edu/tprc/papers/2005/466/TPRC_Overlays_9_8_05.pdf. Akamai reportedly has 56,000 servers in 70 countries, which "continually monitor the Internet" to "intelligently optimize routes and replicate content for faster, more reliable delivery" of the 20 percent of all Internet traffic handled by Akamai. Akamai, Akamai's Technology, *available at* http://www.akamai.com/html/technology/index.html.

284 *See* George Ou, *A meaningful debate on NPRM regulations*, Dec. 8, 2009, *at* http://www.digitalsociety.org/2009/12/a-meaningful-debate-on-nprm-regulations/ (diagramming various CDN and edge-caching models).

285 Christopher J. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1882 (2006).

286 *See* Ou, *supra* n.288.

application providers' websites to run faster and more reliably."[287] In other words, CDNs have built a business model on making Internet fast lanes available only to those willing and able to pay for them.[288]

TWC believes that such services are beneficial and should continue to be allowed. But there can be no legitimate justification for permitting CDNs to deliver content on a non-neutral basis, if broadband Internet access service providers are barred from offering the same service enhancements. Indeed, whatever bright-line distinction the Commission may have in mind between CDNs and ISPs is no longer tenable in light of the convergence in networks and services; to the contrary, in an unrestricted environment, broadband ISPs and CDNs likely would compete head-to-head in offering comparable service enhancements. It is possible that the Commission would treat broadband Internet access service providers' caching and dedicated delivery services as "managed services" that are fenced off from any nondiscrimination requirements. But the uncertain scope of the "managed services" category, together with the uncertain prospects for maintaining their unregulated status, is already producing a significant chilling effect that impedes innovation and distorts competition.

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287 Letter from Brian Evans, Assistant General Counsel, Akamai Technologies, Inc., to Marlene Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137, at 2 (filed Dec. 14, 2009); *see also id.* (stating that Akamai has arranged to locate its servers in over 1,000 of the "more than 25,000 networks . . . that constitute the Internet").

288 Yoo at 1882 ("[T]he fact that content delivery networks are commercial entities means that their benefits are available only to those entities willing to pay for their services."); *see also* Gary Kim, *Content Delivery Networks and Network Neutrality: Net is Not Neutral*, IP Carrier Blog (Nov. 29, 2009), *available at* http://ipcarrier.blogspot.com/2009/11/content-delivery-networks-and-network.html (noting that in 2008, approximately $1.4 billion was spent by companies to permit expedited delivery of content and services to end users by way of CDNs).

c. Backbone Providers

Backbone providers supply the high-capacity, long-haul network connections of the Internet and offer transmission between and among broadband service providers, rather than directly to end users, pursuant to voluntary, unregulated peering and transit agreements.[289] The largest of these—a small group known as "Tier 1" providers—peer with each other to carry similar amounts of each other's traffic without any financial settlement, whereas transit agreements, often reached between a smaller provider and a larger one, consist of the former paying the latter to carry its traffic.[290]

While backbone providers thus have flexibility to craft customized arrangements for different customers to their mutual benefit, they likewise have the freedom to engage in disparate treatment of various network and service providers, including similarly situated entities.[291] Moreover, when a backbone provider's transport is an essential input to a broadband Internet access service provider's service, it likely has the leverage to exploit that flexibility. Indeed, TWC has experienced such disparate treatment: TWC exchanges traffic even with some of the largest Tier 1 providers (such as AT&T and Verizon) on a reasonably symmetrical basis, yet

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289 FTC Report at 25 & n.85.

290 *Id.* at 26; *see also Verizon Communications Inc. and MCI, Inc.; Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18433 ¶ 112 (2005). Additionally, some enterprise customers enter into "service level agreements" directly with backbone providers in order to receive quality of service guarantees. Philip J. Weiser, *The Next Frontier for Network Neutrality*, 60 ADMIN. L. REV. 273, 281 (2008).

291 *See* Craig McTaggart, *Was the Internet Ever Neutral?*, *in* PROCEEDINGS OF THE 34TH TELECOMMUNICATIONS POLICY RESEARCH CONFERENCE 10 (Sept. 30, 2006), *available at* https://www.it-can.ca/direct/pdf/Roundtable18-9-07.pdf ("Ironically, this perhaps most unequal and non-neutral aspect of the Internet's infrastructure is almost universally acknowledged to be a well-functioning, market-driven environment, despite what net neutrality advocates might characterize as the potential for discrimination and even foreclosure of access to parts of the Internet.").

such providers refuse to extend the settlement-free peering they would offer if TWC were simply another backbone provider, thus driving up TWC's costs. In this way, the largest of the Tier 1 backbone providers possess their own "gateway" control to the Internet.

d. Content Providers

One of the core concerns animating the NPRM is the speculative proposition that broadband Internet access service providers might interfere with consumers' ability to access the content of their choosing on the Internet. Accordingly, the proposed rules would mandate access to *all* websites, without exception. Yet some providers of online content—the intended, first-line beneficiaries of this requirement—impose their own limits on who can and cannot access their websites. One recent example, noted above, involves the ongoing negotiations between Microsoft and News Corp. in connection with an arrangement that would reportedly make News Corp. content available exclusively on Microsoft's proprietary search engine, Bing.

Another example—which is occurring today—concerns the limitations that ESPN places on access to ESPN360, its website that streams live sporting events. ESPN makes ESPN360 accessible only to users whose broadband Internet access service provider pays ESPN for the website's content.[292] As a result, some consumers who may want to access the website but whose service providers do not pay for the privilege are unable to do so—a result that the NPRM would outlaw if the broadband Internet access service provider were responsible for it. Such charges result in another inequity as well. It is one thing if anyone who wants to access a particular website must pay for it. But under ESPN's arrangement, *all* of a broadband Internet access service providers subscribers must pay for ESPN360 *whether they want it or not*, because such providers who elect to pay ESPN as it demands must in turn pass the costs onto their

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[292] Adam Thompson, *ESPN Calls a Do-Over On Its Online-Video Site*, WALL ST. J., Aug. 8, 2007, at B1.

subscribers. In other words, *all* of that service provider's subscribers must pick up the tab for special-interest content that only a fraction of them want to view.[293] Because ESPN has exclusive contracts for U.S. distribution of many types of sports content, ESPN360 is the only source for live viewing of many of the sporting events it covers.[294] ESPN, like other content providers, has sought to leverage that position in connection with programming sold to multichannel video programming distributors, and it is now replicating that model in the Internet arena.

Content providers should be free to sell their product in a competitive market. Once again, however, it would pervert the Commission's objectives and distort competition to construct a regime in which broadband Internet access service providers would be flatly barred from blocking access to any content, yet website operators would retain unfettered discretion to block consumers' access to free content for patently anti-competitive reasons. Moreover, there could be no justification for imposing significant constraints on broadband Internet access service providers' ability to charge application providers for service enhancements while allowing the imposition of fees in the other direction. If the Commission deems it necessary to adopt rules to preserve Internet openness, it must address comparable conduct in an evenhanded manner.

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293 *See* Eric Bangeman, *ESPN charging ISPs to carry ESPN360; ESPN tries to carry the cable programming model over to the Internet. Some ISPs aren't buying*, Aug. 1, 2006, *at* http://arstechnica.com/old/content/2006/08/7397.ars.

294 Chris Soghoian, *ESPN's ISP Discrimination Shakes Net Neutrality Hornet's Nest*, CNET News, Sept. 17, 2008, *available at* http://news.cnet.com/8301-13739_3-10043040-46.html.

2. There Is No Basis for Singling Out Broadband Internet Access Service Providers.

Whether the Commission ultimately endorses or criticizes these various practices by application providers, CDNs, backbone providers, and content owners, they all impact Internet openness, for better or for worse, to a far greater degree than anything broadband Internet access service providers are shown to have done. Yet the NPRM would outlaw "discrimination" only when undertaken by broadband Internet access service providers. The NPRM describes a number of theories that purport to justify regulating this category of entities alone, but they are either flawed or apply equally, if not more so, to these other key participants in the Internet ecosystem.

To the extent that the Commission's concern relates to a potential abuse of market power, that premise provides no basis for singling out broadband Internet access service providers. As discussed above, the NPRM does not suggest, much less find, that such entities have market power, nor does it establish a process for evaluating economic power in any relevant market.[295] Moreover, the Commission and the antitrust authorities have expressly found that broadband Internet access service providers are subject to robust competition.[296] The Commission has some discretion to depart from such findings (despite strong indications that competition is more vibrant than ever), but it may do so only if it compiles actual *evidence* of market power,[297] and it has not even undertaken any study that would yield such information.

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295 *See supra* Section I.A.

296 *See, e.g., Wireline Broadband Order* ¶ 62 (observing in 2005 that "[v]igorous competition between different platform providers already exists in many areas and is spreading to additional areas"; *see also* FTC Report at 100 (observing that broadband competition is causing "declining prices for higher-quality service").

297 *See supra* n.134 (citing cases applying APA restrictions on abrupt departures from prior policies or findings).

In contrast, some other participants in the Internet economy almost certainly *do* have market power.[298] Most notably, as discussed, Google not only provides a dominant and ubiquitous search application (among various other applications) but owns and operates extensive infrastructure on which consumers, businesses, and the government have come to depend. Its accumulation of bottleneck control in the online advertising arena has prompted several antitrust investigations.[299] And even if most companies could not plausibly be deemed to have market power now, the Commission would facilitate their acquisition of bottleneck control by preventing broadband Internet access service providers from competing on a level playing field. For example, were the Commission to prohibit broadband Internet access service providers from offering caching services, the Commission would limit competition in the CDN marketplace, with predictable consequences for the companies that benefit from artificial protections and for prices paid by consumers of CDN services.

The NPRM also suggests that, irrespective of any competitive concerns, "long-standing doctrines of common carriage or bailment" would justify scrutiny of broadband Internet access service providers alone.[300] But the assertion that such providers perform "quasi-public functions by providing crucial inputs to many other sectors of the economy and society" is no less true of

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298 *See* NPRM ¶ 70 n.161 (defining market power as the "ability profitably to maintain prices above competitive levels for a significant period of time").

299 *See, e.g.*, News Release, U.S. Department of Justice, *Yahoo! Inc. and Google Inc. Abandon Their Advertising Agreement; Resolves Justice Department's Antitrust Concerns, Competition is Preserved in Markets for Internet Search Advertising*, Nov. 5, 2008, *available at* http://www.justice.gov/atr/public/press_releases/2008/239167.pdf (stating that Google and Yahoo! called off their joint advertising agreement after the Department of Justice informed them of its intent, following an "extensive investigation," to file a lawsuit to block the deal); Steve Lohr, *Google Deal Said to Bring U.S. Scrutiny*, N.Y. TIMES, May 29, 2007 (noting FTC's antitrust inquiry into Google's acquisition of DoubleClick).

300 NPRM ¶ 67.

backbone providers, CDNs, producers of "must-have" content, and application behemoths like Google.[301] As Google itself concedes elsewhere, application providers no less than broadband Internet access service providers are capable of undermining Internet openness and frustrating innovation.[302]

Nor does the fact that broadband Internet access service providers are often characterized as providing the "last mile" of Internet connectivity justify their disparate treatment.[303] As an engineering matter, the demarcation point that determines where the so-called last mile begins is increasingly unclear and the boundaries among different portions of the network increasingly malleable. To illustrate, the term "second mile" was very recently coined to describe the portion of the network between the "last mile" and the "middle mile."[304] Nor is there any policy reason to distinguish providers of first-, second-, middle-, or last-mile transmission, as any of them can affect the flow of traffic in a manner that impacts the openness of the Internet. For example, a CDN server, which enables enhanced delivery of certain traffic, would not be located at what has traditionally been considered the last mile, and Google has its own transit network that it uses to facilitate prioritized access, which likewise would not be "last-mile" transmission. But the labels attached to those entities' network facilities have no bearing on their potential to adversely affect

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301 *Id.* ¶ 67 n.157.

302 *See* Kevin J. O'Brien, *Rivals to Challenge Microsoft Browser Settlement*, N.Y. TIMES, Nov. 4, 2009 (noting Google's efforts to challenge Microsoft's proposed settlement of competition-related claims with the EU based on the argument that providers of web browsing software have the ability to curtail innovation and harm the experience of consumers).

303 *See, e.g.*, NPRM ¶¶ 63 n.144, 71 n.165.

304 Public Notice, *Comment Sought on Impact of Middle and Second Mile Access n Broadband Availability and Deployment (NBP Public Notice #11)*, GN Docket Nos. 09-47, 09-51, 09-137 (rel. Oct. 8, 2009).

the objectives set forth in the NPRM.[305] In short, there is no principled basis for concluding that the portion of the network closest to the customer premises is any more susceptible to openness problems than any other part of the network, even assuming the components can be meaningfully distinguished at all.

Finally, if the jurisdictional analysis set forth in the NPRM is correct, then the Commission could readily assert authority over entities other than broadband Internet access service providers. Notwithstanding TWC's reservations about the validity of that analysis, the Commission's theory that it has authority to regulate broadband Internet access service providers under Title I would enable it to extend the same rules to other companies that provide transmission by wire or radio as a wholesale input or retail aspect of their services. In particular, backbone providers, CDNs, and major application providers like Google all provide a transmission functionality that is no less important to consumers than that provided by broadband Internet access service providers, readily bringing them within the Commission's jurisdiction under its theory. While Google has publicly questioned the Commission's regulatory authority over its services, the fact that it operates transmission facilities and incorporates that self-provisioned "telecommunications" functionality into its information

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305 Analogously, the Commission has increasingly acknowledged that the network can be dissected into many segments and suggested that none of these component parts should be presumptively subject to or free from regulatory scrutiny. *See* Public Notice, *Comment Sought on Broadband Measurement and Consumer Transparency of Fixed Residential and Small Business Services in the United States (NBP Public Notice #24)*, GN Docket Nos. 09-47, 09-51, 09-137, at 2 & Ex. 1 (rel. Nov. 24, 2009) (setting forth diagram of broadband end-to-end network broken down into five components with six possible endpoints and seeking comment on which parts of the network are most relevant to consumers, service providers, and regulators); *see also* Rob Curtis, *The Second and Middle Mile Challenge*, Oct. 8, 2009, *at* http://blog.broadband.gov/?entryId=10657 (stating, with respect to the Commission's public notice on second-mile and middle-mile connections, "we hope that its release will inform us on the crucial—if not gating role—that these connections play").

service offerings makes it no different from broadband Internet access service providers. Therefore, if the Commission has jurisdiction over broadband Internet access service providers at all, there is no bar to reaching all major players in the Internet ecosystem, and it must do so for its framework to have any validity.

E. The Commission Should Limit Any Transparency Requirements to Consumer Disclosures.

In addition to its extensive focus on "discrimination" issues, the NPRM seeks comment on the codification of a "sixth principle" of transparency, which would require the disclosure of network management practices to consumers "as well as to content, application, and service providers and to government."[306] TWC supports and practices transparency, as it has described at length in recent comments submitted in parallel proceedings.[307] In particular, TWC already provides clear and conspicuous disclosures to consumers regarding its acceptable use policies and the impact of its network management practices, and it will continue to do so as its business practices evolve.[308] Although the NPRM appears to presume that such practices are the exception to the rule,[309] TWC's practices are far from unique—a fact that is underscored by the record recently compiled in the Commission's inquiry concerning disclosure practices

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306 NPRM ¶ 118.

307 *See generally* TWC Consumer Disclosure Comments at 5-13; TWC Consumer Disclosure Reply Comments at 5-6.

308 *See, e.g.*, Time Warner Cable Operator Acceptable Use Policy, *available at* http://help.twcable.com/html/twc_misp_aup.html (describing TWC's "Network Management Tools"); Time Warner Cable Residential Services Subscriber Agreement, *available at* http://help.twcable.com/html/twc_sub_agreement2.html.

309 *See, e.g.*, NPRM ¶ 123 (stating that only a "handful" of broadband Internet access service providers disclose their network and congestion management policies). The NPRM's pessimism is based on a record that is by now fairly stale. It states that broadband Internet access service providers should be required to disclose more information than they "currently" do, but it cites comments that are over two-and-a-half years old. *Id.* ¶ 122 (citing comments from June 2007). Since those filings, disclosure practices have evolved considerably, as the record in the Commission's truth-in-billing docket bears out.

generally.[310] The threat of consumer backlash along with the protections provided by existing consumer protection laws create strong incentives to provide complete and accurate disclosures regarding network management practices. Through such measures, the industry already achieves the goal behind the NPRM's proposed disclosure requirement of "allow[ing] users to make informed purchasing and usage decisions,"[311] thereby obviating the need for any further disclosure requirements.

If the Commission nevertheless determines that rules are required to ensure adequate disclosures, such transparency requirements should apply to all entities in the Internet ecosystem. Plainly, the benefits of disclosure are in no way limited to broadband Internet access service providers. Online users should have as much information as possible regarding the consequences of, and the conditions that apply to, their use of various applications and services. But that information is not necessarily in the hands of the broadband Internet access service provider; rather, it is often controlled by other entities who thus should be required to disclose it. Moreover, some applications are recognized to carry certain risks that make such disclosure all

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310 *See, e.g.*, Comments of Verizon and Verizon Wireless, WC Docket No. 07-52, at 15 (Feb. 13, 2008) ("Most broadband providers . . . routinely provide consumers with meaningful information concerning the nature and limits of their services, including in their detailed terms of service and generally in their marketing materials."); Reply Comments of Comcast Corporation, CG Docket No. 09-158 *et al.*, at 9 n.30, 12 & n.39 (filed Oct. 28, 2009) (describing disclosures of network management practices). Another example of the ongoing vigilance of the online community is the Electronic Frontier Foundation's "Test Your ISP" Project, which provides a means for testing broadband services and aims "to ensure that the Internet community has the tools and organization to quickly recognize when ISPs engage in interference or protocol discrimination in the future." Electronic Frontier Foundation, *Test Your ISP*, http://www.eff.org/testyourisp (last visited November 25, 2009).

311 NPRM ¶ 122.

the more compelling. In particular, legislation has been proposed that would impose disclosure obligations in connection with P2P applications.[312]

Therefore, to the extent the Commission remains inclined to adopt an affirmative disclosure requirement, it should apply to all entities. There is no reason why broadband Internet access service providers should be held to a higher standard in terms of transparency. As discussed above, other players in the broadband arena employ practices that circumscribe the degree to which consumers can access and use certain content and services. Thus, for example, search engines should be transparent about their rules for prioritizing paid search and the ways they prioritize non-paid search. Notably, Google appears to concede the validity of this principle,[313] and it should be held to its word if the Commission proceeds with the adoption of rules.

Regarding the specifics of such a rule, TWC supports the notion that any transparency requirement the Commission ultimately may adopt should be "minimally intrusive."[314] The operative text of the proposed rule—which would limit disclosure to that which is "reasonably required"—is consistent with that guideline, provided that it is understood to afford entities subject to this obligation flexibility to adjust their communications with customers as necessary in response to marketplace and technological conditions. Moreover, providers should be able to

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312 Specifically, the "Informed P2P User Act," H.R. 1319, is intended to prevent the inadvertent disclosure of information on a computer through the use of P2P applications without first providing notice and obtaining consent from the owner or authorized user of the computer.

313 *See* Schmidt & McAdam, *Finding Common Ground on an Open Internet, supra* (stating that "transparency is a must" and that "[a]ll providers of broadband access, services and applications should provide their customers with clear information about their offerings").

314 NPRM ¶ 118; *see also id.* ¶ 126 (seeking comment on how to tailor any disclosure requirement so as "not to unduly burden" broadband Internet access service providers).

meet such a requirement by posting appropriate descriptions of their practices on their websites or in their promotional materials, as the NPRM suggests.[315]

Any new rules should not, however, require additional disclosures by broadband Internet access service providers to content, application, and service providers as the NPRM contemplates.[316] There are several problems with that proposal. The first concerns the asymmetry noted above. There is no reason why broadband Internet access service providers should be required to provide details concerning their network management practices to application providers, while the latter group would remain free from disclosing the network demands they impose. If anything, it would make more sense to require providers of bandwidth-heavy applications to share information with broadband Internet access service providers to enable the latter group to plan for and manage congestion effectively. Further, the imposition of such "upstream" disclosure requirements would be superfluous. As long as broadband Internet access service providers (among others) make fulsome disclosures to their subscribers—as they already do—such information necessarily will be available to other service providers as well, without any need to inflict additional disclosure burdens.[317]

Finally, such disclosures would risk serious harm by providing bad actors with a roadmap for how to evade reasonable efforts to manage networks and thereby protect consumers. TWC

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315 *Id.* ¶ 126.

316 *See id.* ¶ 127.

317 In contrast, broadband Internet access service providers would be unduly and unnecessarily burdened by anything approaching the Commission's comparably efficient interconnection and open network architecture requirements set forth in its *Computer Inquiry* decisions, which the NPRM suggests as one possible model for an upstream disclosure requirement. *See id.* Compliance with those requirements—which never applied to more than a subset of monopoly providers—is notoriously burdensome, and the Commission has gradually moved to eliminate them as a result. *See, e.g.*, *Wireline Broadband Order* ¶¶ 31, 86.

and others previously have explained that the push for such disclosure rules is led not by consumers, but by application providers seeking to undercut the effectiveness of network management practices.[318] In fact, proponents of regulation readily concede that they are at least partially motivated by a desire to develop "counter-measures" to circumvent broadband Internet access service providers' efforts to manage their networks.[319] As discussed, the NPRM reflects the near-universal agreement that reasonable network management is essential.[320] Forcing broadband Internet access service providers to provide detailed disclosures of their practices in this regard to the very entities that compel the need for network management in the first place risks negating any benefit of network management.

In addition, it is an unfortunate fact of life that hackers, spammers, and even terrorists are keenly focused on ways to disrupt online services. As many parties have explained, providing bad actors a roadmap of how to engage in denial-of-service attacks and similar harm at a minimum would endanger service quality, risk exposing subscribers to the potential theft of personal data and other harms, and potentially even jeopardize public safety and national security.[321] In this sense, the expanded disclosure obligations contemplated in the NPRM would threaten significant harm for consumers.

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318 TWC Net Neutrality Reply Comments at 14.

319 *See* Petition for Rulemaking of Vuze, Inc. WC Docket No. 07-52, at 11 (filed Nov. 14, 2007) ("[W]hile Vuze has been able to minimize any serious impact on its service, it has been forced to engage in constant guesswork—since the tactics are largely hidden—and to play a 'cat and mouse' game with network providers."); Comments of Free Press, WC Docket No. 07-52, at 62 (filed Feb. 13, 2008) (stating that disclosure would allow consumers "to use counter-measures"); Comments of the Open Internet Coalition, WC Docket No. 07-52, at 9 (filed Feb. 13, 2008) (describing "arms race" in which application providers seek to overcome broadband Internet access service providers' traffic management policies).

320 *See supra* Section II.C.

321 TWC Net Neutrality Reply Comments at 15 (citing other comments).

F. The Commission Should Adopt the NPRM's Proposal to Refrain from Regulating Managed IP-Based Services.

TWC strongly supports the Commission's apparent intention to exclude "managed" or "specialized" IP-based services from the scope of the proposed regulations.[322] Whatever the justification for using regulation to preserve the end-to-end principles described in the NPRM,[323] managed services are distinct in several important respects and warrant different treatment.

Based on the discussion in the NPRM, TWC understands that this intended exception would encompass dedicated, IP-based communication services that rely on physically or logically segregated bandwidth, in contrast with broadband Internet access services that provide connectivity to the "public" Internet using best-efforts transmission.[324] Although such managed services often are provisioned using the same network infrastructure that supports broadband Internet access—whether fiber, coaxial cable, copper loops, or wireless spectrum—the segregation of this specialized IP traffic enables the provision of fixed transmission speeds and service quality assurances. These emerging services, which could include telemedicine, smart grid, distance learning, as well as IP voice and video services, offer significant value to consumers.[325]

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322 NPRM ¶ 108 (stating that because such managed services are distinct from broadband Internet access services, "none of the principles we propose would necessarily or automatically apply to these services"); *id.* ¶ 149 (recognizing that "it may be inappropriate to apply the rules proposed here to managed or specialized services," and that such services "may differ from broadband Internet access services in ways that recommend a different policy approach).

323 *See id.* ¶ 19.

324 *Id.* ¶¶ 148-53; *see also id.* ¶ 108 (listing as examples of such services "some services provided to enterprise customers, IP-enabled 'cable television' delivery, facilities-based VoIP services, or a specialized telemedicine application").

325 *Id.* ¶ 108 (stating that managed services "may require enhanced quality of service to work well"); *id.* ¶ 148 ("The existence of [managed] services may provide consumer benefits, including greater competition among voice and subscription video providers, and may

While the Commission's authority to regulate in this context is uncertain as a general matter,[326] it is even more dubious in connection with these specialized services, and the Commission thus should explicitly carve them out from the scope of its proposed regulations. Indeed, none of the purported bases identified by the Commission in support of the proposed rules—whether in the NPRM or in its prior enforcement order against Comcast—could conceivably apply to this class of specialized services. While the record is extremely thin in support of regulating broadband Internet access services, there is no record at all demonstrating any concerns about "openness" in the context of managed services.

Moreover, because these services do not implicate the zero-sum prioritization concerns associated with best-efforts transmission on the public Internet, there would be no need to apply the proposed regulations to them, and doing so anyway would substantially reduce if not negate their value. Mandating any type of restriction on discrimination would undercut the viability of such services and, in turn, discourage the deployment of the type of broadband infrastructure that supports them. Nor is there any public policy reason to contemplate such regulation, since consumers purchase these services without any expectation of "openness" associated with the "public" Internet. To the contrary, any discussion of regulating the emerging or established categories of managed services would have a severe chilling effect on the public benefits these services entail for commerce, health care, education, entertainment, and more.

Finally, these services are subject to distinct regulatory frameworks in many cases, rendering additional layers of requirements superfluous. For example, IP-based video services—which the Commission notes as an example of the specialized services at issue—are (or at least,

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lead to increased deployment of broadband networks."); *id.* ¶ 150 (noting the potential for managed services that include "specialized telemedicine, smart grid, or eLearning applications").

326 *See supra* Section I.D.1.

should be) subject to the panoply of requirements under Title VI.[327] There is no need to consider supplementing or supplanting those existing requirements, even assuming the Commission has authority to do so (a proposition that appears dubious in the video context). Accordingly, the Commission should confirm that managed or specialized services, as described in the NPRM, are exempt from the proposed rules, consistent with past Commission practice.[328]

CONCLUSION

TWC appreciates the Commission's interest in the important issues at stake in this proceeding, and it welcomes the Commission's commitment to developing fact-based and data-driven policy solutions. Those goals, together with the need to preserve investment, innovation, and experimentation in a rapidly changing marketplace, counsel strongly against adopting any rules at this time. The proposed rules would undercut the Commission's own objectives, including in connection with the National Broadband Plan. If the Commission nevertheless proceeds with new mandates, it should make the targeted modifications described in these comments. TWC looks forward to working with the Commission and other interested parties in this critical endeavor.

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327 NPRM ¶ 150. Of course, the particular example cited in the NPRM, AT&T's U-verse video service, has not yet been required to comply fully with Title VI, and its regulatory status has hung in limbo for many years.

328 *Id.* ¶ 34; *see also AT&T Inc. and BellSouth Corp.; Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, App. F at 5814 (2007) (specifically exempting "managed IP services" from the scope of "net neutrality" obligation imposed in connection with merger approval).

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