NAFEO
National Association
For Equal Opportunity
In Higher Education

February 11, 2010

Honorable Julius Genachowski
Chairperson, Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Preserving the Open Internet, GN Docket No. 09-191
Ex Parte Communication

Dear Chairman Genachowski:

I am writing as President & CEO of the National Association for Equal Opportunity in Higher Education (NAFEO), in response to your notice for public comments regarding Preserving Open Internet, to respectfully request that as you and the Commissioners consider Open Internet you closely examine the impact that the proposed rules might have on the affordability and availability of broadband technology in un- and underserved communities, such as those represented by NAFEO.

The National Association for Equal Opportunity in Higher Education (NAFEO) is the not-for-profit national membership association of the nation's 105 Historically Black Colleges and Universities (HBCUs) and 50 Predominantly Black Institutions (PBIs), located in 35 states, the District of Columbia, Virgin Islands and Brazil. NAFEO member institutions are located in urban, rural and remote underserved communities.

Founded in 1969, NAFEO is the only membership association of its kind, representing the presidents and chancellors of the diverse black colleges and universities: public, private and land-grant, two-year, four-year, graduate and professional, historically and predominantly black colleges and universities. NAFEO was founded to provide an international voice for the nation's HBCUs; to place and maintain the issue of equal opportunity in higher education on the national agenda; to advocate policies, programs and practices designed to preserve and enhance HBCUs; and to increase the active participation of blacks at every level in the formulation and implementation of policies and programs in American higher education.

Fostering broadband access is in alignment with NAFEO's mission and its goals of strengthening HBCUs and PBIs; ensuring that these campuses, the communities they serve, and especially, the students that they prepare for success have access to leading edge technology, and that they learn to use it as a driving force for education, exploration, commerce, public service, civic engagement and other facets of their lives.

We commend you and President Obama for your efforts to bring the issue of universal broadband to the forefront of our domestic policy agenda. We share your understanding about how broader access to high-speed technology in the home, in the classrooms, and in our local communities can facilitate the development of the next generation of thoughtful, creative, economic, philanthropic, government, civic, faith, service and other leaders. Affording students access to broadband in their formative years can expand their horizons immeasurably and can bridge the socio-economic gap by connecting all students, including low-income and first generation students, with places, things, and experiences around the globe and in outer space. Access to high-speed technology can position students to continue to learn and thrive academically even in areas with high numbers of low-performing schools. In this regard, broadband can serve as a "playing filed adjuster" for students in underserved communities. According to a study by *CIO Today*, students with home Internet access and computers are about 25% more likely to go to college than those without the same access. It is essential

200 Third Street, SE • Washington, DC 20003 • (202) 552-3300

that every student in America have this valuable academic preparedness and success tool, especially students from families of lest advantage.
The incredible pace of the technological evolution encourages us. We see it on our own campuses daily. Where we once greatly benefited from having video and cable in the classrooms, today broadband in the classrooms is expanding horizons exponentially: connecting students in Chicago with those in China; students in Mississippi and Maryland with those in Madrid. Students work alongside faculty on smartphones and with leading edge education applications and websites. Our members embrace these technologies as ways for assisting students to learn far beyond the walls of the campus. Increasing numbers of our members are offering online classes and resources, creating virtual campuses, connecting students, faculty, administrators, and communities.

For the above and other reasons we would be pleased to share with you and the FCC Commissioners at a mutually convenient time, we respectfully request that as you consider new rules and regulations, you pay close attention to the impact that the proposed rules might have on the affordability and availability of broadband technology in un- and underserved communities.

Ultimately, we define this moment as the opportunity the Commission should seize to bridge the digital divide before more students are left behind. In this regard, we would like to bring the attached new research paper to the Commission's attention. The paper, **Addressing the Next Wave of Internet Regulation:The Case For Equal Opportunity** discusses the proposed ban on "discrimination". The co-authors note that discrimination "raises concerns when it interferes with what is often referred to as "equality of opportunity." However, the Commission's proposed nondiscrimination policy, which would limit the ability of service providers and content providers to contract on terms that (1) are mutually agreeable to both parties, (2) are available to all prospective consumers, and (3) do not impose significantly externalities on third parties, is inimical to promoting equality of opportunity."

Thank you for affording us this opportunity for comment.

Sincerely,

Lezli Baskerville
President & CEO

cc:
Commissioner Meredith Attwell Baker
Commissioner Mignon Clyburn
Commissioner Michael J. Copps
Commissioner Robert M. McDowell

Addressing the Next Wave of Internet Regulation: The Case For Equal Opportunity

Robert Hahn, Robert Litan and Hal Singer

January 2010

GEORGETOWN UNIVERSITY McDonough SCHOOL of BUSINESS

37th & O Streets, NW Suite 558 Washington, DC 20057
PHONE: 202.687.3686 EMAIL: cbpp@msb.edu WEB: http://cbpp.georgetown.edu/

Abstract

In October 2009, the Federal Communications Commission released a Notice of Proposed Rule Making in which it asked for guidance on how to convert a principle of "nondiscrimination on the Internet" into a practical rule for broadband service providers. The ultimate formulation of the nondiscrimination principle could have a significant economic effect on economic welfare in the short term and on innovation. In this paper, we explain the economics of discrimination and offer a new approach for identifying anticompetitive discrimination.

Discrimination raises concerns when it interferes with what is often referred to as "equality of opportunity." However, the Commission's proposed nondiscrimination policy, which would limit the ability of service providers and content providers to contract on terms that (1) are mutually agreeable to both parties, (2) are available to all prospective consumers, and (3) do not impose significantly externalities on third parties, is inimical to promoting equality of opportunity. Moreover, given the two-sided nature of the Internet access market, a blanket rule forbidding broadband service providers from offering quality of service to content providers (and charging for it) would likely harm end-users and certain content providers.

Addressing the Next Wave of Internet Regulation: The Case For Equal Opportunity

Robert Hahn[1], Robert Litan[2] and Hal Singer[3]

I. Introduction

In a September 2009 speech, the Chairman of the Federal Communication Commission ("the Commission"), Julius Genachowski, called for a new nondiscrimination principle that would govern the behavior of broadband service providers ("BSPs").[4] Chairman Genachowski has proposed that the Commission ensure that BSPs do not:

> [B]lock or degrade lawful traffic over their networks or pick winners by favoring some content or applications over others in the connection to subscriber's homes, nor can they disfavor an internet service just because it competes with a similar service offered by that broadband provider.[5]

The ultimate formulation of the nondiscrimination principle could have a significant economic effect on BSPs, Internet content and application providers ("content providers"), and end-users. Thus, any rules that are developed must be carefully drawn or they may give rise to significant rent-seeking on the part of participants without commensurate gains in economic efficiency. In other words, the FCC needs to be careful it does not

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1. Senior Visiting Fellow at the Smith School, University of Oxford and Senior Fellow at the Georgetown Center for Business and Public Policy. The authors are grateful to the Georgetown Center for Business and Public Policy for support.

2. Vice President for Research and Policy at the Kauffman Foundation and Senior Fellow in Economic Studies at the Brookings Institution.

3. President and Managing Partner, Empiris, LLC and Adjunct Professor at Georgetown McDonough School of Business.

4. Julius Genachowski, Improving Broadband and Mobile Communications, The Brookings Institution, Sept. 21, 2009.

5. *Id.* at 12.

unintentionally harm consumers. Following the speech referenced above, the FCC released a subsequent Notice of Proposed Rule Making ("NPRM") in which it asked for comment on how to implement a nondiscrimination principle.[6]

How the FCC defines discrimination for purposes of a nondiscrimination obligation is of paramount importance. A broad definition would be tantamount to line of business restrictions for BSPs and content providers. For example, if discrimination is defined as offering customized services to content providers—as proponents of net neutrality[7] are inclined to do—then a nondiscrimination rule would preclude a network operator from, among other things, selling enhanced quality of service ("QoS") to a content provider at any price.

In its NPRM, the FCC proposes a nondiscrimination rule that is based on a broad definition of discrimination—and thereby consistent with the one embraced by net neutrality proponents—that would be limited only by considerations of network management:

> Based on the record, we propose a *general* rule prohibiting a broadband Internet access service provider from discriminating against, or in favor of, any content, application, or service, subject to reasonable network management. More specifically we propose the following new rule: '5. Subject to reasonable network management, a provider of broadband

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6. Federal Communications Commission, *In the Matter of Preserving the Open Internet/Broadband Industry Practices, Notice of Proposed Rulemaking*, GN Docket No. 09-191/WC Docket No. 07-52, Oct. 22, 2009, ¶ 11 [hereinafter *NPRM*].

7. The authors have written extensively on economics of net neutrality. *See, e.g.*, Robert W. Hahn, Robert E. Litan & Hal J. Singer, *The Economics of Wireless Net Neutrality*, 3 JOURNAL OF COMPETITION LAW AND ECONOMICS 399 (2007); Robert E. Litan & Hal J. Singer, *The Unintended Consequences of Net Neutrality,* 5 JOURNAL ON TELECOMMUNICATIONS AND HIGH TECH LAW 533 (2007); Hal J. Singer, *Net Neutrality: A Radical Form of Non-Discrimination*, REGULATION, Summer 2007; Robert W. Hahn & Robert E. Litan, *The Myth of Net Neutrality and the Threat to Internet Innovation*, MILKEN INSTITUTE REVIEW 28 (2007).

> Internet access service must treat lawful content, applications, and services in a nondiscriminatory manner.'[8]

The Commission clarifies its meaning of the term discrimination as follows:

> We understand the term "nondiscriminatory" to mean that a broadband Internet access service provider may not charge a content, application, or service provider for *enhanced or prioritized access* to the subscribers of the broadband Internet access service provider, as illustrated in the diagram below. We propose that this rule would not prevent a broadband Internet access service provider from charging subscribers different prices for different services.[9]

Thus, the Commission seems inclined to bar any contracts for enhanced QoS.

In addition to seeking guidance on the definition of discrimination, the Commission also seeks comment on how to implement a case-by-case approach to adjudicate discrimination complaints bought by content providers:

> In addition, we recognize that Internet and computer technologies, as well as associated market structures, are in constant flux. Accordingly, we seek comment on a case-by-case approach to adjudicating violations of the principles. Under such an approach, we would evaluate the facts of particular cases against the principles codified in a general form, rather than crafting detailed rules. Accordingly, we seek comment on a case-by-case approach to adjudicating violations of the principles.[10]

Because of the immense economic significance of both the ultimate definition of discrimination and the ultimate process the Commission adopts for adjudicating individual discrimination complains, it is critical that all stakeholders understand the impact a poorly drawn definition of discrimination can have across the entire Internet marketplace.

Our paper is organized as follows. In Part II, we explain the economics of discrimination. Discrimination in its standard sense raises concerns when it interferes

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8. *NPRM* ¶ 104 (emphasis added).
9. *Id.* ¶ 106 (emphasis added).
10. *Id.* ¶ 12.

with what is often referred to by philosophers, sociologists, and economists as "equality of opportunity" or "freedom of opportunity." However, a nondiscrimination policy as contemplated in the NPRM would limit the ability of BSPs and content providers to contract on terms that are (1) mutually agreeable to both parties, (2) available to all prospective consumers, and (3) do not impose significantly externalities on third parties is inimical to promoting equality of opportunity. Given the two-sided nature of the Internet access market, a blanket rule forbidding BSPs from offering QoS and charging for it would necessarily prevent BSPs from using incremental revenues garnered from the content side of the market to subsidize end-users. In other words, banning companies from being able to contract with each other for mutually desirable objectives and on mutually agreeable terms will have immediate and measurable impact on consumers.

In Part III, we propose a solution to the Commission's question pertaining to a case-by-case approach, which builds on our definition of discrimination. Our proposal would require a complaining content provider to prove (1) the BSP has discriminated in favor of some affiliated content provider that is "similarly situated" to the independent content provider, (2) such disparate treatment is based on affiliation and not on some other consideration, (3) the independent content provider has been unreasonably restrained in its ability compete, and (4) the harm it suffers as a result of the discrimination would likely redound to the harm of broadband users. The first prong highlights the importance of affiliation for the nondiscrimination standard; without it, a BSP lacks the incentive to discriminate in an anticompetitive way. The second prong is needed to rule out the possibility that the disparate treatment is not based on some efficiency consideration. The third prong, which requires a showing of competitor injury, is needed to prevent spurious

cases from draining the Commission's resources. The fourth and final prong is required to differentiate cases of foreclosure (where a rival is harmed) and anticompetitive foreclosure (where both a rival and end-users are harmed).

II. The Economics of Internet Discrimination

From an economic perspective, the Internet nondiscrimination policy proposed by the Commission in the NPRM must be evaluated based on its effect on the allocation of society's scarce resources in the short term and on innovation and economic welfare in the longer term. As part of the NPRM, the Commission seeks assistance on the definition of discrimination that should underlie Commission policy towards an open Internet.[11] Defining discrimination in such a way as to bar voluntary agreements between BSPs and content providers for superior QoS would reduce society's economic welfare in the aggregate, and it is inconsistent with the standard meaning of the term discrimination. In Part II.A below, we articulate a standard for defining the term discrimination that is consistent with the principles that normally underlie nondiscrimination policies and that is useful for distinguishing good economic policy from bad economic policy. In Part II.B, we discuss the potential harm that forbidding contracts for superior QoS would have on BSPs, content providers, and end-users in terms of the efficiency criteria described above. Finally, in Part II.C, we discuss how discrimination that is likely to reduce economic efficiency can be distinguished from legitimate business conduct.

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11. *Id.* ¶ 16.

A. An Economic Definition of Discrimination

The term discrimination in standard economic usage connotes differential treatment of entities based on an involuntary or fixed characteristic. In economics, the term price-discrimination reflects a firm charging different prices for the same good or service based on consumers' preferences or willingness to pay, a characteristic that is by definition fixed or pre-determined in basic economic models. From the perspective of the discriminator, an entity that is subject to discrimination is identical to an entity that is not subject to discrimination except for the former's membership in the category that prompts the discrimination. Consequently, in the absence of that categorical difference, the entities would be treated equally. From a policy standpoint, discrimination in its standard sense raises concerns when it interferes with what is often referred by philosophers, sociologists, and economists as "equality of opportunity"[12] or "freedom of opportunity."[13] Construed in economic terms, discrimination may reduce consumer welfare when it limits the ability of people to use the market mechanism to maximize their utility. In a competitive market, an individual firm will not be able to effectively limit the opportunities of consumers because market forces will undermine the firm's incentive and ability to discriminate. On the other hand, where competition is significantly imperfect, a well designed government policy may increase economic efficiency and consumer welfare.

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12. Richard Arneson, *Equality of Opportunity*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY, Oct. 8 2002, *available at* http://plato.stanford.edu/entries/equal-opportunity/ ("Social mobility may be possible in a caste society, but the process whereby one is admitted to a different level of the hierarchy is open only to some individuals depending on their initial ascriptive social status. In contrast, when equality of opportunity prevails, the assignment of individuals to places in the social hierarchy is determined by some form of competitive process, and all members of society are eligible to compete on equal terms."); MILTON FRIEDMAN, CAPITALISM AND FREEDOM 208 (University of Chicago Press 2002).

13. AMARTYA SEN, RATIONALITY AND FREEDOM 8-13 (Harvard University Press 2004).

Based on this analysis, the goal of an economically efficient nondiscrimination policy would be to encourage equality of opportunity and therefore economic efficiency. However, a nondiscrimination policy that would limit the ability of firms and consumers to contract on terms that are (1) mutually agreeable to both parties, (2) available to all prospective consumers, and (3) did not impose significantly externalities on third parties is inimical to promoting equality of opportunity. The guiding principle behind a blanket rule proscribing any agreement between a BSP and a content provider is not nondiscrimination in its standard sense, but is instead "equality of outcome."[14] Government interventions that foster equality of *outcome* (rather than equality of *opportunity*) reduce economic efficiency by prohibiting firms and consumers from entering into mutually beneficial agreements.

A critical distinction can be drawn at this point between limiting standard discrimination and imposing specific outcomes. In the former instance, different prices are charged for the exact same service. In the latter instance, a firm is prohibited from charging different prices for different levels of service. Consequently, consumers *are effectively prohibited from buying a service they value*. This decreases social welfare through exactly the same economic mechanism that is operative when standard discrimination reduces economic efficiency. In the context of the net neutrality debate, an overly broad definition of discrimination would deny content providers and BSPs to enter into mutually beneficial QoS agreements.

In the remainder of this section, we employ this framework to assess the policy implications of the broad discrimination standard suggested by the Commission in the NPRM. We demonstrate that the best economic policy towards the provision of broadband

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14. Freidman, *supra*, at 208.

Internet service would encourage equality of opportunity rather than codifying laws that would actually institutionalize discrimination against content providers and consumers who would benefit from superior service. Policies designed to promote equality of opportunity will counterproductively reduce economic efficiency if they are directed at legitimate business conduct.

B. The Economic Consequences of the NPRM's Broad Discrimination Standard

A careful consideration of the economic forces underlying the provision of broadband internet services makes clear why the Commission should design rules that promote competitive outcomes rather than restricting choice. The provision of broadband Internet service is what is known in economics as a "two-sided" market because BSPs interact with two distinct groups of consumers, content providers and end-users.[15] Content providers' demand for broadband service is driven by their desire to reach end-users, and end-users' demand for broadband service is driven by the content on the Internet. Consequently, BSPs must consider this interdependence when setting their prices. As economists Jean-Charles Rochet and Jean Tirole explained in their seminal paper on competition in two-sided markets: "To succeed, platforms in industries such as software, portals and media, payment systems and the Internet, must 'get both sides of the market on board.'"[16] Economic research on two-sided markets has demonstrated that socially optimal pricing (the set of prices that maximizes the value of the network) requires the platform to charge lower prices to the side of the market with more elastic demand (that is, the less

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15. Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EURO. ECON. ASSOC. 990 (2003).
16. *Id.*

sensitive to increases in prices).[17] A blanket rule forbidding BSPs from charging content providers for QoS would necessarily prevent BSPs from using incremental revenues garnered from the content side of the market to subsidize end-users.[18] Thus, a broad discrimination standard as contemplated by the Commission would perversely attenuate the value of the Internet to both content providers and end-users in aggregate.

This potential harm resulting from a blanket prohibition against contracts for QoS would likely be exacerbated when transaction costs are considered. Each end-user consumes a variety of content while each content provider is focused on maximizing the value of its unique offering. Thus, content providers undoubtedly have a better initial understanding of their bandwidth requirements than end-users do; under a net neutrality regime, end-users would not only bear the cost of paying for superior service, but they also would be forced to consider potentially complex engineering issues as well. Furthermore, consumer contracts for broadband service are not perfectly malleable, but instead generally entail specific capacity constraints. Even if end-users perfectly understood their usage requirements, the practical limitations inherent in contracting for broadband service would force end-users to consider their *average* usage requirements rather than

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17. Wilko Bolt & Alexander F. Tieman, *Skewed Pricing in Two-Sided Markets: An IO Approach*, Netherlands Central Bank Research Department Working Paper 013 (2005) at 1 ("In two-sided markets, one widely observes skewed pricing strategies, in which the price mark-up is much higher on one side of the market than the other. Using a simple model of two-sided markets, we show that, under constant elasticity of demand, skewed pricing is indeed profit maximizing. The most elastic side of the market is used to generate maximum demand by providing it with platform services at the lowest possible price. Through the positive network externality, full participation of the high-elasticity, low-price side of the market increases market participation of the other side. As this side is less price elastic, the platform is able to extract high prices. Our skewed pricing result also carries over when analyzing the socially optimal prices.").

18. Although it is true that content providers already make contributions to revenue via access charges, some content providers would be willing to make even greater contributions to revenue if offered higher QoS.

optimizing for each type of content individually. Rules forbidding contracting for QoS would also increase transaction costs on the supply side of the market. Because the content side of the market is more concentrated than the end-user side of the market (that is, there are more end-users than content providers), BSPs can reduce their costs by contracting directly for QoS with content providers who serve large numbers of end-users. The ultimate effect of such regulation would be to foreclose BSPs from serving end-users through a highly efficient competitive avenue available to both groups—the provision of specific content. Indeed, when this very strategy is implemented by a dominant firm to increase its monopoly power, it is considered anticompetitive and an antitrust offense.[19]

Net neutrality regulation is also likely to reduce innovation in both the development of network infrastructure and the provision of Internet-based content. Proponents of net neutrality regulation have tried to co-opt the innovation argument by contending that small content-providers (the NPRM uses the example of Black Dinah Chocolatiers[20]) at the fringe of the network will be less innovative as a result of contracting for QoS (with positive prices). Taken to its logical conclusion, however, this argument implies that Internet access should be provided free of charge to all content providers to maximize fringe innovation. But this argument assumes that the network infrastructure of the internet is simply a commodity product that can be supplied by a number of fungible BSPs. It ignores the fact that both the initial establishment of the network and its ongoing management require

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19. *United States of America v. Dentsply International Inc.*, 399 F.3d 181(3d Cir. 2005); Dennis W. Carlton, Patrick Greenlee & Michael Waldman, *Assessing the Anticompetitive Effects of Multiproduct Pricing*, Working Paper (2008) at 21 ("One manner in which marginal cost could increase is if the pricing strategy denies access to the most efficient method of distribution.").

20. *NPRM* ¶ 20 ("Firms as large as Amazon.com and as small as Black Dinah Chocolatiers have made online shopping an everyday reality, creating more convenience for customers and more opportunities for merchants in remote locations.").

significant investment. Because innovation occurs at both the content level and the network level, the following economic considerations must be taken into account in contemplating the outcome of a broad discrimination standard.

- *First*, forbidding content providers from contracting for superior QoS is likely to deter innovation from content providers whose business strategy involves gaining a competitive advantage through investment in superior QoS to end-users.

- *Second*, constraining BSPs' ability to maximize their profits may retard network innovation.

- *Third*, to the extent that there is a large amount of demand for superior service, the likely outcome is higher blanket prices for broadband service to end-users—an outcome that will perversely deter the fringe content innovation that net neutrality advocates ostensibly aim to protect.

- *Fourth*, enhanced QoS offerings (with positive prices) will only disadvantage content providers that are in competition with a rival content provider offering superior service. Shackling rivals who want to invest in offering a superior product to end-users that requires QoS to run effectively is tantamount to a policy that is aimed at deterring innovation for the purpose of maintaining absolute equality of outcome.

In contrast, a policy that protects and fosters equality of opportunity (and not equality of outcome) promotes economic efficiency, both in the static sense of resource allocation and in the dynamic sense of facilitating investment and innovation.

C. An Economic Approach for Distinguishing Discriminatory Conduct that Threatens Economic Efficiency from Legitimate Business Conduct

To design a nondiscrimination policy that promotes economic efficiency, one must first understand the conditions under which a BSP has both the incentive and the ability to discriminate in an economically inefficient manner. In the absence of significant market power in the access market, it is unlikely that a BSP would have the *ability* to engage in anticompetitive discrimination. Indeed, a necessary condition for adverse welfare effects in

nearly every economic model of vertical foreclosure is that the firm in question has market power—that is, the ability to raise price above competitive levels or exclude rivals. When a firm lacks market power, vertical restraints cannot in theory be motivated by anticompetitive reasons,[21] and are therefore more likely motivated for efficiency reasons.

In our opinion, BSPs generally lack market power, as evidenced by the rapidly declining prices for broadband services[22] and the significant expansion of output,[23] both of which are inconsistent with the notion of market power. More importantly, a *local* BSP lacks the ability to foreclose a content provider that generates content with *nationwide* or *global* appeal. Most content providers are not vying for the consumers in one particular locality. When viewed in this light, the market structure of the U.S. broadband market is not conducive to an exercise of market power. Table 1 shows the national market shares for the major BSPs in the United States.

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21. *See, e.g.*, Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal--Why Aspen and Kodak Are Misguided*, 68(3) ANTITRUST LAW JOURNAL 659 (2001).

22. *See, e.g,* International Telecommunications Union, Measuring the Information Society: The ICT Development Index, 2009, at 65-66, *available at* http://www.itu.int/ITU-D/ict/publications/idi/2009/material/IDI2009_w5.pdf (finding that the United States is the most affordable on a currency-exchange-rate basis, and fourth most affordable on a PPP basis); OECD, Broadband Growth and Policies in OECD Countries (2008), Figure 1.14 (finding that the low end of U.S. broadband prices in 2007 ranked *fifth* in a 30-country survey of prices); Pew Internet, Home Broadband Adoption 2009, at 25 (finding that average U.S. broadband prices fell by four percent between December 2005 and April 2008, even as speeds increased) [hereinafter *Pew Report*].

23. *Pew Report, supra*, at 3 (finding increases in broadband penetration from 47 percent in 2007 to 63 percent by 2009); SNL Kagan (2008), *available at* http://www.ncta.com/Statistics.aspx (accessed on Nov. 12, 2009) (finding that 92 percent of U.S. homes have access to cable modem service); Federal Communications Commission, In the Matter of 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 (June 12, 2008), Appendix B, Table 14 (finding that 82 percent of U.S. homes have access to DSL); Comments of CTIA-The Wireless Association, WC Dkt. No. 05-337, filed April 17, 2008, at Attachment 1 (finding that 92 percent of the population has access to a wireless 3G network in their primary place of residence).

TABLE 1: U.S. BROADBAND MARKET SHARES FOR TOP 15 PROVIDERS (THIRD QUARTER 2008)

Rank	BSP	Subscribers (millions)	Market Share
1	AT&T (business and consumer DSL, U-Verse, and satellite)	14.8	15.4%
2	Comcast (cable broadband)	14.7	15.3%
3	Time Warner (cable broadband, business and residential)	8.6	9.0%
4	Verizon (FiOS and DSL)	8.5	8.8%
5	America Online (all U.S. AOL brand accounts)*	7.5	7.7%
6	EarthLink (DSL, cable, satellite)*	3.0	3.1%
7	Charter (cable broadband)	2.9	3.0%
8	Qwest (DSL only)	2.8	2.9%
9	Cablevision (cable broadband)	2.4	2.5%
10	United Online (counting paid access only)	1.5	1.5%
11	Embarq (DSL only, formerly part of Sprint)	1.4	1.4%
12	Windstream (DSL only, formerly ALLTEL and Valor)	.96	1.0%
13	Mediacom (cable broadband, dialup, and SMB broadband)	.73	0.8%
14	CenturyTel (DSL only, no dialup)	.63	0.7%
15	Citizens (DSL only)	.57	0.6%

Source: ISP-Planet, Top 23 U.S. ISPs by Subscriber: Q3 2008, Dec. 2, 2008 (based on analysis from Jupiter Research), *available at* http://www.isp-planet.com/research/rankings/usa.html.
Note: * Includes dialup customers. To the extent that dialup customers were removed from the table, the shares would not change significantly so long as former dialup customers converted to broadband customers in proportion to the existing broadband shares.

Proponents of net neutrality assume incorrectly that the relevant geographic market to assess the alleged anticompetitive effects from enabling BSPs and content providers to contract for QoS is the local market—that is, they assume that a content provider is offering content that is particular to a given locality and therefore requires access to a broadband service provider's subscribers in a given locality. The problem with that argument, however, is that nearly all Internet content is not local. At a minimum, it is national, and it is more likely international. As Table 1 shows, the national broadband access market is so unconcentrated (the largest provider, AT&T, has less than 16 percent market share) that no single BSP could foreclose a national content provider from a significant share of the broadband market. Indeed, if BSPs possessed the market power vis-à-vis content providers that net neutrality proponents assert, then BSPs would exploit such power today by raising the price of broadband Internet access to content providers. Although broadband Internet

access is a complementary input to enhanced QoS in the production process for content providers, broadband Internet access has *not* (at least for now) been the subject of the net neutrality debate.

Even if one were to assume there is market power in the supply of broadband access,[24] in the absence of vertical integration into the content space, a BSP will lack any *incentive* to discriminate between content providers who demand the same service. In particular, a vertically integrated BSP will only have an incentive to discriminate against content that competes directly with content provided by an upstream affiliate of the BSP. This incentive arises from the fact that harm to the rival content provider will aid the affiliated content provider, leading to greater profits for the BSP. Accordingly, as a gateway issue, a content provider that seeks to bring a discrimination complaint against a BSP should be required to demonstrate that it is "similarly situated"—that is, it competes in some meaningful sense for end-users and advertisers—to the upstream *affiliate* of a BSP. Without evidence of affiliation, there is no incentive to discriminate.

It is essential to define "similarly situated" such that the Commission's nondiscrimination policy promotes equality of opportunity. As discussed above, discrimination, as far as the term is construed in an economically useful sense, involves an entity withholding an opportunity, good, or service from one group but providing it to another based solely on a fixed, identifying characteristic. On the other hand, offering different services at different prices does not represent discrimination under this standard

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24. Thus, assuming for argument's sake that the BSP market is defined on a local basis, there may be cases where the four conditions for potential harm that we outline below are present. In that event, the Commission could then address discrimination on a *case-by-case* basis—an approach that, as we later discuss, is consistent with the case law in this area.

so long as the offering is available to all consumers on equal terms. Consequently, discrimination is a relative concept—one cannot prove discrimination by looking at the absolute level of treatment afforded to one entity. In the context of the net neutrality debate, the crucial consideration is whether a content provider has been denied the *same* treatment afforded to a BSP's affiliated content provider because of its lack of affiliation with the BSP.

In sum, if there is no difference in the treatment across two similarly situated applications, then there is no discrimination. If there is a difference in the treatment across two similarly situated applications, but if the difference in treatment is not predicated on affiliation, then the BSP has no incentive to degrade the opportunities available to the content provider; the ostensible difference in treatment at issue should be treated as legitimate business conduct. To make matters concrete, the possibility that Verizon (to pick one BSP) might charge Sony (to pick one content provider) more for providing it a different service (enhanced QoS) from *all other* application providers does not constitute discrimination. Discrimination would only be a concern if (1) Verizon refused to extend the same terms that it offered to Sony for enhanced QoS to a *similarly situated* content provider, and (2) Verizon's disparate treatment of that content provider was based on its affiliation with Sony. But these requirements would only be the beginning of our inquiry. As we describe below, even if those two conditions were satisfied, intervention would not be justified without additional evidence of competitive harm.

D. The Commission's Ill-Conceived Economic Bases for Barring Contracts between BSPs and Content Providers

The Commission offers two reasons why, even in the absence of market power, BSPs cannot be trusted to choose the "right" price for QoS. *First*, the Commission argues that the mere "potential for such [QoS] fees may deter outsiders from investing in long-term research and development that could benefit all of society."[25] We have already addressed this basis above; to reiterate, this concern is purely speculative (no one has estimated a content provider's elasticity of demand for capital given an increase in the price of QoS), and it appears to place an inappropriate amount of weight on investment at the "edge" of the network (by content providers) relative to investment at the "core" of the network (by BSPs). *Second*, the Commission offers a novel, collective-action theory to explain a purported market inefficiency in broadband: "Even 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, even though it may be in the *collective interest* of all providers to charge a lower price or zero price in order to maximize innovation at the edge of the network and thereby increase the overall value of broadband Internet access."[26] The NPRM further explains its collection-action theory as follows:

> This dynamic raises a collective action problem: Although it might be in the collective interest of competing broadband Internet access service providers to refrain from charging access or prioritization fees to content, application, and service providers, it is in the interest of each individual access provider to charge a fee, and given multiple providers, it is unlikely that access providers could tacitly agree *not* to charge such fees.[27]

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25. *NPRM* ¶ 63.
26. *Id.* ¶ 68 (emphasis added).
27. *Id.* ¶ 69 (emphasis in original).

The Commission appears to be proposing a regulatory "work-around" for BSPs to escape antitrust scrutiny. According to its logic, if BSPs could somehow coordinate in the setting of prices for QoS, they would choose a zero price according to the NPRM; yet competition among BSPs drives them to set an inefficiently positive price. (Of course, if the jointly profit-maximizing price for QoS were zero, and if net neutrality allowed BSPs to achieve that allegedly optimal solution, then BSPs would favor net neutrality regulation! Alas, they do not.) Again, this basis for intervention is purely theoretical and is not recognized in regulatory economics as a solid basis for intervention. The sole intellectual source of this novel theory is a paper by Professor Nick Economides of New York University.[28] In that paper and in another one described in more detail below, Professor Economides lays out the *theoretical* conditions under which a monopoly platform provider (and a second time for duopoly platform providers) would set a price for content providers in excess of the price that would be established by a social dictator. Importantly, Professor Economides never attempts to prove that the necessary conditions for that finding are satisfied in the U.S. broadband market. And neither does the Commission.

In a related paper, Professors Nicholas Economides and Joachim Tåg suggest that the benefit to broadband subscribers of departing from a net neutrality regime may be small or even negative.[29] Their theoretical analysis may not capture the essence of the

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28. Nicholas Economides, *"Net Neutrality," Non-discrimination and Digital Distribution of Content Through the Internet*, 4 I/S: A J. OF L. & POL. FOR THE INFO. SOC'Y 209 (2008); see also Nicholas Economides & Joachim Tåg, Net Neutrality on the Internet: A Two-Sided Market Analysis, NET Institute Working Paper No. 07-45 (2007) [hereinafter *Economides & Tag*].

29. Economides & Tåg, *supra*. Specifically, Economides and Tåg suggest that a departure from net neutrality may reduce end user welfare by restricting the amount of content available to end users. They suggest that the harm from lower content provision may more than offset any benefits

current net neutrality debate. In particular, Economides and Tåg argue that net neutrality will result in many more content providers than would occur if all content providers were compelled to pay for network *access*.[30] But because it is unrealistic to assume that content providers that do not purchase enhanced QoS will be excluded from the network entirely (Black Dinah Chocolatier would exist just fine without QoS), their results may not be policy-relevant. Once again, the authors note that there are *theoretical* conditions under which charging fees to both sides of the market would be socially optimal.[31] Yet they do not demonstrate *empirically* whether those conditions are satisfied in practice. Although this is not a shortcoming of their theoretical paper (a theoretician does not need to prove that his theory matches the real world), the Commission should not base its policy decision on a purely theoretical argument.

Perhaps the most jarring comment in the NPRM is the notion that market power and vertical integration (that is, affiliation with content providers) would merely *exacerbate* the alleged anticompetitive effects of allowing such contracting; these factors are not considered by the Commission to be *necessary* conditions for the challenged conduct (charging a positive price for QoS) to generate anticompetitive effects. With respect to the role of market power, the Commission notes: "Where effective competition is lacking (*i.e.*,

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end users receive from paying lower broadband prices. They do not, however, provide an empirical analysis of net neutrality regulation.

30. *Id.* at 25 ("Comparisons between outcomes under the private equilibrium with two-sided pricing and the private equilibrium under net neutrality regulation indicated that a removal of net neutrality regulation would lead to lower subscription price for consumers, but less content available due to an increase in fees to content providers.").

31. *Id.* For both the monopolistic and oligopsonistic version of their model Economides and Tåg suggest that "for a wide range of parameter values, the private and social incentives to set a positive fee to content providers diverge." Ignoring the parameter values under which these incentives are the same (and thus it is socially beneficial to charge fees to content providers), they conclude that "social welfare is reduced supporting the result that net neutrality regulation is good for total welfare."

where broadband Internet access service providers have market power), it is *more likely* that price and quality discrimination will have socially adverse effects."[32] In other words, market power is not critical to the existence of market failure here. With respect to the role of affiliation, the Commission argues: "Where broadband Internet access service providers have market power and are vertically integrated or affiliated with content, application, or service providers, *additional* concerns may arise."[33] Issues related to vertical integration, which are a key element in our proposed framework for identifying anticompetitive discrimination below, are considered secondary to the Commission's collective-action theory. In sum, the Commission wishes to dispose of the critical conditions that are the hallmarks of market failures. Regulatory economics teaches that in the absence of negative externalities or market power, intervention will likely generate more harm than good. The Commission seems determined to reject that wisdom.

III. A Consumer-Oriented Policy Approach

In addition to seeking guidance on the definition of discrimination, the Commission also seeks comment on how to implement a case-by-case approach to adjudicate discrimination complaints bought by content providers.

A. The Appropriate Policy Concern Is Anticompetitive Discrimination

The ultimate purpose of regulatory policy is to promote consumer welfare. We have already shown that if discrimination is defined in the non-standard and broad manner currently proposed by the NRPM, the resulting policy is likely to harm consumers despite its best intentions. In this section, we use the definition of discrimination adopted in the

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32. *NPRM* ¶ 70 (emphasis added).
33. *Id.* ¶ 72 (emphasis added).

previous section to develop a policy that focuses on deterring discriminatory conduct that is likely to harm consumers—that is, anticompetitive discrimination. The welfare effect of banning certain conduct by BSPs is ambiguous. In a June 2007 Staff Report, the Federal Trade Commission noted that the principal concerns of net neutrality proponents—namely, exclusive dealing, vertical integration, and discriminatory conduct vis-à-vis content providers—are anticompetitive *only under certain conditions.*[34] Because there are plausible, procompetitive reasons for these strategies, the concerns raised by net neutrality advocates are probably best addressed on a case-by-case basis, using an *ex post* enforcement regime. Any policy promoted here by the Commission that seeks to achieve "non-discrimination" should, at a minimum, be flexible enough to accommodate certain types of voluntary business agreements.

B. Identifying Anticompetitive Discrimination

Based on our analysis above, antitrust principles, and existing FCC procedures for resolving discrimination in other contexts, a content provider should have to show the following if it wanted to prevail in a discrimination complaint against a BSP:

(1) the BSP has offered inferior terms to a "similarly situated" independent content provider vis-à-vis an affiliated content provider;

(2) the resulting disparate treatment is based on affiliation and not based on some efficiency rationale;

(3) as a result of the disparate treatment, the content provider has been unreasonably restrained in its ability to compete;

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34. FEDERAL TRADE COMMISSION, STAFF REPORT: BROADBAND CONNECTIVITY COMPETITION POLICY, June 2007, at 8 ("Such leveraging may take the form of exclusive dealing arrangements, refusals to deal, vertical integration, or certain unilateral conduct. All of these types of conduct can be anticompetitive and harmful to consumers under certain conditions.").

(4) the resulting harm the content provider suffers would likely redound to the harm of broadband users.

Failure to satisfy any one of those evidentiary requirements would imply that the challenged conduct is likely procompetitive, and therefore should extinguish the complaining party's case. In sum, the Commission's nondiscrimination standard should be aimed at protecting consumer welfare and not the welfare of a particular competitor.

IV. Conclusion

The Commission appears ready to abandon years of best practices in regulation and decades of antitrust precedent in favor of intervention without proof of market power or proof of negative externalities. Regulatory economics teaches that, in the absence of any good reasons not to trust market-based outcomes, intervention will likely reduce social welfare on net. By embracing net neutrality, the Commission must reject the notion that markets can be trusted to set prices for enhanced services such as QoS. According to its proponents, any positive price for QoS constitutes the wrong price from society's perspective. The reason why economists prefer the market mechanism over regulatory fiat is that, in the absence of market failure, prices can be relied upon to efficiently allocate scare resources in an economy. But the Commission seems willing to embrace the notion that no prices for such services are better than a positive price. The unintended consequence of interfering with the price-setting process in this way would likely be to divert resources away from applications that could make use of QoS and to place upward pressure on the price of broadband access for end-users.

In this paper, we have offered a more meaningful definition of discrimination in the Internet space than the one proposed in the NPRM. We have also attempted to address the

FCC's question relating to the design of a case-by-case approach. By focusing on what makes a discriminatory act anticompetitive, the FCC will likely weed out the bad discrimination while preserving the good.