Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	WC Docket No. 07-52
Broadband Industry Practices	)	

REPLY COMMENTS OF AT&T INC.

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INTRODUCTION AND SUMMARY

Since the advent of broadband Internet access ten years ago, this Commission—acting through Chairmen and Commissioners of both political parties—has consistently rejected calls to impose new regulations on broadband providers and has committed itself to keeping the Internet an unregulated free-enterprise zone. That policy commitment has played a fundamental role in the Internet's phenemonal success. The question in this proceeding is whether that policy of unregulation should be preserved.

The answer is a resounding "yes." Dozens of organizations, representing Americans from across the political and demographic spectrums, have filed comments urging the Commission to follow its congressional mandate to keep the Internet "unfettered by Federal or State regulation."[1] As these commenters recognize, market forces have fueled the Internet's phenomenal growth to date and are the best hope for serving consumer interests into the future. Indeed, after carefully studying the same basic question presented here for almost a year, the bipartisan Federal Trade Commission unanimously approved a June 2007 report stating that it was "unaware of any significant market failure or demonstrated consumer harm from conduct by broadband providers."[2] It urged policymakers to "be wary of enacting regulation solely to prevent prospective harm to consumer welfare," because such regulations may have a variety of "adverse effects" on consumers and "could result in a long-term decline in investment and innovation in broadband networks."[3]

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1 47 U.S.C. § 230(b)(2); *see also* Pub. L. 104-104, Title VII, § 706, 110 Stat. 153 (47 U.S.C. § 157 note) (instructing FCC to follow a policy of "regulatory forbearance" where needed to "remove barriers to infrastructure investment").

2 FTC Staff Report, *Broadband Connectivity Competition Policy* at 160 (June 27, 2007) ("FTC Net Neutrality Report").

3 *Id.*

Proponents of so-called "net neutrality" rules offer nothing in this proceeding that could even remotely call into question the FTC's conclusions. Instead, they make several critical concessions that undermine their calls for sweeping Internet regulation.

First, as a threshold matter, the main pro-regulation commenters have prudently disclaimed any effort to impose "neutrality" obligations on managed IP services, including IPTV. Instead, their advocacy focuses solely on Internet access services.[4]

Second, these pro-regulation commenters concede that "the Internet today is not an absolutely 'neutral' place"[5]—and has never been so. As Google admits, "the various servers, routers, and content delivery networks that comprise [the Internet] can and do distinguish routinely between various forms of traffic."[6] And those "routine" distinctions have always had important market consequences. For example, applications and content providers with the resources to buy access to a content delivery network—or to build their own such networks, as Google has done—tend to give their end users better on-line experiences than providers without such resources, and, as a direct result, they are more likely to succeed in the marketplace.

Third, while websites like SaveTheInternet.com still call for the government to reduce the Internet to a set of "dumb pipes,"[7] pro-regulation commenters admit that broadband providers should in fact retain discretion to give priority to packets associated with highly performance-

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4 *See, e.g.*, Center for Democracy and Technology (CDT) Comments 10 ("CDT's view is that delivery of some content over the non-Internet portion of broadband networks will generally not be harmful."); Google Comments 23 (acknowledging that broadband providers "should be free to provide managed IP services and proprietary content (IPTV), which do not involve Internet-derived content" and to "manag[e] the security and bandwidth-usage aspects of their own applications and content").

5 Google Comments 4 n.6.

6 *Id.*

7 *See* SavetheInternet.com Coalition, Net Neutrality 101 (http://www.savetheinternet.com/=101) (visited July 11, 2007) ("every Web site, every feature, and every service should be treated exactly the same").

sensitive applications, such as streaming video, over packets associated with less performance-sensitive applications like e-mail.[8] The opening comments thus confirm that most advocates of net neutrality regulation invoke the "dumb pipes" metaphor mainly for its populist appeal to credulous audiences and that no one who has thought seriously about the issue wants broadband providers to treat all packets the same.

Fourth, in response to the Commission's request for hard facts to support the pro-regulation advocates' loose language about market failure, those advocates confess that—nearly ten years after the Kennard Commission first dismissed calls to impose "open access" requirements on cable modem services—they are unable to produce a "roster of actual and potential 'bad acts'" because there is "*not* [a] behavioral" problem in the broadband market today.[9] This fundamental inability to demonstrate *any* evidence of an actual market failure confirms what all the rhetoric in the world cannot obscure: "net neutrality" is a solution in search of a problem.

Indeed, there is not even a *theoretical* basis for concern that broadband providers will engage in anticompetitive conduct, given the dynamic and interdependent nature of the Internet marketplace. And in all events, any such concern, even if plausible, would be properly addressed through *ex post* enforcement measures, not through preemptive command-and-control regulation. Imposing such regulation now, with its forced commoditization and artificial limits on cost-recovery, would succeed only in deterring broadband providers from continuing to make

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[8] *See, e.g.*, NASUCA Comments 9 ("Effective use of the Internet requires that time-sensitive packets receive priority over time-insensitive packets."); Google Comments 22 ("Most known network management techniques will create few if any competitive and discrimination issues. So, for example, it is entirely reasonable for a broadband provider to utilize legitimate application and content-neutral practices – such as . . . prioritizing all packets of a certain application type, such as streaming video.").

[9] Google Comments 10 (emphasis added); *see also* Open Internet Coalition Comments 5.

the multi-billion-dollar investment gambles essential to the future of the broadband Internet. The net neutrality agenda would likewise increase consumer rates, depress broadband subscribership, deepen the digital divide, exacerbate regulatory uncertainty, and trigger an unparalleled new generation of costly litigation.

Finally, as explained in AT&T's opening comments, any "neutrality" or "nondiscrimination" regulation could not end with broadband providers. Instead, it would have to start with firms that, like Google, have more profound structural influences on the Internet than any broadband provider. Indeed, Google has reportedly used its own Internet search engine to discriminate in favor of the political messages it supports. According to one press account, "Google's top Washington lobbyist disclosed [in 2006] that the company had configured its search engine to return paid links that support Google's position on net neutrality after the entry of certain key words."[10]

Again, however, the Commission should not walk down this regulatory road at all. Rather, it should maintain its justly celebrated commitment to the free play of market forces in the Internet ecosystem.

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[10] *Google Web Search: Do No Evil?*, Multichannel Newsday, June 12, 2006 ("'This week we've been running a large set of which I would call public service announcement-type advertisements. So if you type in net neutrality at Google, you'll see advertisements for the Its Our Net coalition or other sites we may be pointing to,' Google policy counsel Alan Davidson said[.]").

ARGUMENT

I. THE INTERNET WILL CONTINUE TO PRODUCE UNPRECEDENTED CONSUMER VALUE TO THE EXTENT THE COMMISSION ADHERES TO ITS POLICY OF UNREGULATION.

A. Pro-Regulation Advocates Have Identified No Market Failure to "Fix."

Commenters across the country, representing a vast range of consumer and business interests, embrace the statutory "policy of the United States . . . to preserve the vibrant and competitive *free market* that presently exists for the Internet and other interactive computer services, *unfettered by Federal or State regulation.*"[11] As these commenters recognize, the Internet is thriving precisely because the FCC has allowed market forces to build unprecedented consumer value, and they therefore urge the FCC to reject proposals for intrusive new regulation of the Internet. These commenters include representatives of—

- minority communities (*e.g.*, League of United Latin American Citizens ("LULAC"); Leadership Education for Asian Pacifics, Inc. ("LEAP"); Hispanic Technology & Telecommunications Partnership; Asian American Justice Center);
- rural communities (*e.g.*, the National Grange);
- minority-owned businesses (*e.g.*, National Black Chamber of Commerce; United States Hispanic Chamber of Commerce);
- labor unions (*e.g.*, Labor Council for Latin American Advancement);
- seniors (*e.g.*, OASIS Institute; SeniorNet);
- medical professionals (*e.g.*, Health Tech Strategies, LLC);
- telecommunications equipment manufacturers (*e.g.*, Fiber-to-the-Home Council; Telecommunications Industry Association; Ad Hoc Telecom Manufacturer Coalition);
- wireless service providers (*e.g.*, Sprint Nextel; T-Mobile; CTIA—The Wireless Association);

[11] 47 U.S.C. § 230(b)(2) (emphasis added); *see also* Pub. L. 104-104, Title VII, § 706, 110 Stat. 153 (47 U.S.C. § 157 note) (instructing FCC to follow a policy of "regulatory forbearance" where needed to "remove barriers to infrastructure investment").

- upstart developers of Internet content and applications (*e.g.*, Providea; Video Access Alliance; Internet Content and Service Provider Coalition; Horror Channel); and

- ordinary broadband consumers (*e.g.*, National Association of Neighborhoods; American Consumer Institute; American Homeowners Grassroots Alliance).

The breadth and strength of this opposition explode the myth that the main opponents of net neutrality regulation are broadband providers.

Shortly after the opening comments were filed, the opposition to preemptive Internet regulation swelled to include one of the most important consumer advocates of all: the Federal Trade Commission. In a June 2007 Staff Report, unanimously approved by the FTC's five Commissioners, the FTC found that, by all indications, the broadband Internet access industry is "young and dynamic" and is "moving in the direction of more, not less, competition, including fast growth [and] declining prices for higher-quality service."[12] The FTC further explained that "we are unaware of any significant market failure or demonstrated consumer harm from conduct by broadband providers."[13] The FTC warned that "[p]olicy makers should be wary of enacting regulation solely to prevent prospective harm to consumer welfare," both because there is no demonstrated *need* for such regulation and because "[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."[14]

The FTC's considered opposition to preemptive net neutrality regulation closely resembles the position announced three months ago by the international Organisation for Economic Co-operation and Development (OECD), which monitors market conditions and

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[12] FTC Net Neutrality Report, *supra*, at 10-11. One of the FTC's five members (Commissioner Leibowitz) filed a short concurring statement; the other four approved the Staff Report without further comment.

[13] *Id.* at 11.

[14] *Id.* (emphasis added).

develops regulatory policy proposals for its thirty member nations around the world. The OECD recently found that "[t]here is little evidence of anti-competitive conduct to date," and "it seems premature for governments to become involved at the level of network-to-network traffic exchange and demand neutral packet treatment for content providers."[15] This same view is shared by Internet founders David Farber and Robert Kahn, by former FCC Chairman William Kennard, by preeminent economists such as Michael Katz, Gerald Faulhaber, William Baumol, and Alfred Kahn, and by publications as diverse as the *Washington Post*, the *Wall Street Journal*, and the *Economist*.[16]

Meanwhile, the primary advocates of subjecting the Internet to command-and-control regulation—regulation they euphemistically dub "a comprehensive federal broadband policy"[17]—cling to their founding myths.[18] Foremost among these is the myth that there is some *problem* with the Internet that regulation is needed to solve. But the Commission has placed the pro-regulation parties on notice that they must now produce facts, rather than rhetoric, to support their proposals; indeed, the Commission cannot lawfully impose new regulations *without* such an

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15 OECD Report, *Internet Traffic Prioritisation: An overview* 5 (Apr. 6, 2007) (http://www.oecd.org/dataoecd/43/63/38405781.pdf).

16 *See* AT&T Comments 3-4 & n.7, 84 n.223; NCTA Comments 3-4 & nn.7, 9.

17 Open Internet Coalition Comments i; *see also* Google Comments 2.

18 While many individuals filed one-page form comments prepared for them by the main proponents of regulation, that is because the drafters of these form comments deceived the well-meaning signatories into believing that the issue here is "whether [the Commission] should . . . let companies like AT&T, Verizon and Comcast *dictate which Web sites you can use*." *See* http://www.savetheinternet.com/yourstory (visited July 13, 2007) (emphasis added). But this concern about anticompetitive blocking and service degradation is a sham, and the Commission's *Broadband Policy Statement* addresses it any event. *See* AT&T Comments 64. Ultimately, these advocates of net neutrality regulation have succeeded only in drumming up votes for the truism, which everyone supports, that broadband providers should not anticompetitively block applications and content on the Internet. They have not begun to garner widespread support for their much broader and more intrusive regulatory agenda.

evidentiary record.[19] As Commissioner McDowell stressed at the outset of this proceeding: "For those who fear or allege market failure, this NOI gives them an opportunity to present *detailed evidence*, of which *we have none*, thus far. . . . [W]e . . . must resist the temptation to impose regulations that are based merely on theory."[20]

In response, the proponents of net neutrality regulation have not identified a single instance of anticompetitive conduct by a U.S. broadband provider, beyond the alleged, short-lived effort of a small rural carrier (Madison River) to block VoIP traffic. And as discussed in our opening comments, the quick resolution of the Madison River controversy confirms that *ex post* remedies, including antitrust actions, are more than adequate to deal with the threat of any recurrence.[21]

Lacking any further market failures to cite, the pro-regulation commenters try to excuse this deficiency with yet more rhetoric, all of which is unavailing. For example, having conceded that they cannot identify any "'bad acts,'"[22] Google and other pro-regulation commenters try to excuse that omission by shifting the burden to broadband providers to prove the absence of market failure. Specifically, Google suggests that, despite the Internet's apparent success, "it

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19 *See National Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 843 (D.C. Cir. 2006) ("[p]rofessing that an order ameliorates a real industry problem but then citing no evidence demonstrating that there is in fact an industry problem is not reasoned decisionmaking").

20 Notice of Inquiry, *Broadband Industry Practices*, 22 FCC Rcd 7894, *12-*13 (2007) (Statement of Commissioner Robert M. McDowell) (emphasis added); *see also* Tr. of Open Commission Meeting, Mar. 22, 2007 (http://www.fcc.gov/realaudio/mt032207.ram) (exchange between Commissioner McDowell and Wireline Competition Bureau Chief Tom Navin concerning this proceeding) (Commissioner McDowell: "[T]o the best of your knowledge, since the Madison River case and the adoption of the FCC's net neutrality principals, have any complaints, formal or informal, been filed with the Commission under the net neutrality umbrella?" Mr. Navin: "Not that we are aware. Indeed, *I think that is what made writing the NOI so difficult, is the lack of real world problems to base the NOI on*.") (emphasis added).

21 AT&T Comments 68-69.

22 Google Comments 10.

may well be that discriminatory behavior is taking place right now," thus producing a *secret* market failure, but that it is impossible to explain *how* the market has failed because "[m]uch of [the relevant] information obviously is in the exclusive possession of the broadband providers."[23] In other words (Google says), although no one can identify evidence of a market failure, that is not because the advocacy for preemptive regulation is flawed; it must be because broadband providers have improperly covered something up. This baseless conjecture cannot begin to justify the radical Internet regulation that Google proposes. Indeed, Google's speculation about some unknown market failure collapses of its own weight because the record here demonstrates that the market has succeeded spectacularly in satisfying consumer needs: prices have fallen, speeds have increased, and consumers are enjoying more innovative services than ever before.[24] That Google and others must resort to such conspiracy theories underscores their inability to fill the empirical void at the heart of their regulatory proposals.[25]

Some advocates of new Internet regulation try to explain away the absence of any market failure by contending that "the key legal and administrative decisions exempting broadband from any potential application of common carrier rules are still quite recent," and that "[a]ny strategies for capitalizing on this legal freedom could be expected to take some time to develop[.]"[26] This theory is not only facile, but inaccurate. Cable modem service, which dominated the broadband

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[23] *Id.* at 34; *see also* CDT Comments 5; Open Internet Coalition Comments 12; Computer & Communications Industry Ass'n Comments 3-4.

[24] AT&T Comments 61-62.

[25] It is also ironic that Google, of all companies, should promote this type of conspiracy-mongering. Industry analysts have expressed increasing concern that *Google itself* may be concealing discriminatory elements in the proprietary algorithms used in its own search engine, which is entrenched in its market dominance by an exceptionally capital-intensive content delivery network of unparalleled scope and processing power. *See* AT&T Comments 15-17, 86-88. As discussed in Section IV below, moreover, there *is* an empirical predicate for concerns that Google has engaged in covert deviations from principles of "neutrality."

[26] CDT Comments 4 (emphasis omitted).

market until recently, has been completely unregulated since its inception ten years ago. In the late 1990s and in 2000, under the deregulatory leadership of then-Chairman William Kennard, the Commission repeatedly declined invitations to impose "open access" obligations on cable companies.[27] In 2002, the Commission made this deregulatory policy official at the culmination of a formal proceeding,[28] a decision ultimately upheld by the Supreme Court.[29]

In short, for more than a decade, cable modem providers have been completely unregulated, and they have also occupied an enormous share of the broadband market. But they have never acted anticompetitively towards unaffiliated applications and content providers, despite the pro-regulation advocates' misplaced suggestions to the contrary.[30] The early, short-lived restrictions that a few cable companies once imposed on VPNs, home networks, and certain categories of high-bandwidth applications were designed either to boost the number of broadband subscriptions or to manage network congestion on a content-neutral basis. No one can seriously contend that these policies constitute evidence of a market failure, particularly given the cable companies' rapid termination of these policies in response to consumer feedback.[31] In fact, after examining these same allegations in its Net Neutrality Report, the FTC

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[27] *See, e.g.*, Mem. Op. & Order, *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor to AT&T Corp., Transferee*, 14 FCC Rcd 3160, ¶¶ 60-96 (1999).

[28] *See* Declaratory Ruling, *Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities*, 17 FCC Rcd 4798 (2002).

[29] *See National Cable & Telecomm'ns Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).

[30] *See* CDT Comments 6; Timothy Wu, *Network Neutrality, Broadband Discrimination*, 2 J. Telecomm'ns & High Tech. L. 141, 156-64 (2003).

[31] *See, e.g.*, Fiber-to-the-Home (FTTH) Council Comments 47 & n.107. The Consumer Federation of America (CFA) also objects to present-day broadband service plans because they "forbid the operation of servers or hosting" and "reserve the right to monitor and throttle transmission speeds." CFA Comments 97. But these are routine and unobjectionable means of ensuring that network capacity is shared equitably by all subscribers. Where such restrictions

concluded that there has been no "significant market failure" or "demonstrated consumer harm" from the conduct of broadband providers.[32] This clean track record should come as no surprise: broadband providers have no incentive to impair the value of their broadband platforms by anticompetitively blocking or degrading unaffiliated applications and content, and the competitive marketplace would punish them if they tried.[33]

Third, a few self-styled "consumer advocates" paper over their failure to identify any anticompetitive treatment of applications and content providers by changing the subject altogether. These commenters claim that "America has fallen steadily from global leadership in Internet connections and communications to a place well back in the pack"; that today's broadband providers "have dribbled out capacity in small increments at high prices, to such an extent that where truly broadband networks are concerned, Americans pay 10 to 20 times as much as the Japanese, Koreans, and many Europeans"; and that pervasive government regulation would somehow correct, rather than exacerbate, "this grim situation."[34] There are two basic problems with this argument: its empirical premise is false; and, even if that premise were true, it would logically support the opposite policy conclusion.

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apply, customers remain free to purchase more sophisticated service plans with greater upstream capacity if they wish, for example, to host websites with their own on-site servers. CFA also criticizes AT&T for reserving "the right (but not the obligation) to monitor any and all traffic routed through the Service, and in their sole discretion to refuse, block, move or remove any Content that is available via the Service." *Id.* at 96-97. This policy serves primarily to enable AT&T to block illegal content, such as child pornography, and comply with the needs of law enforcement. CFA identifies no basis for suggesting that any provider is using these restrictions to act in an anticompetitive manner. Indeed, leading net neutrality proponents, such as Google, include very similar language in their own service plans. *See* pp. 54-55, *infra.*

32 FTC Net Neutrality Report 11.

33 *See* AT&T Comments 66-71; pp. 20-26, *infra*.

34 CFA Comments 11-12; *accord* Open Internet Coalition Comments i, 1.

As the FTC recently found, the U.S. broadband marketplace is characterized not by "dribbled out capacity in small increments at high prices,"[35] but by "*fast* growth [and] *declining* prices for *higher-quality* service."[36] For example, four years ago, AT&T offered its then-fastest residential DSL service (up to 1.5 Mbps) at $49.95 per month; it now offers DSL service with speeds up to 6 Mbps at $34.99, and it has dropped the price of its up to 1.5 Mbps service to $19.99.[37] The FTC further explained that "comparisons of broadband deployment and adoption rates across countries may not be meaningful," given that the foreign countries with the most impressive statistics are much more densely populated than this country and, unlike the United States, often *subsidize* broadband deployment through tax and other mechanisms.[38]

In any event, even if U.S. broadband penetration rates were somehow deficient, the solution would be to give broadband providers additional incentives to build out their networks, *not* to saddle them with new regulatory burdens as they contemplate risking many billions of dollars in additional broadband deployment. This point eludes some proponents of net neutrality regulation, but it is obvious to everyone else, including the OECD. Indeed, although the pro-regulation advocates often cite the OECD's survey of international broadband penetration as evidence that the United States has "fallen behind," the OECD itself has concluded that net

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35 CFA Comments 11.

36 FTC Net Neutrality Report, *supra*, at 10-11 (emphasis added).

37 AT&T Comments 62. CFA complains that the failure of broadband networks to enhance "upload" speeds—for example, to the "30-40 Mbps" needed to "*originat[e]* high-quality video"—"is a clear example of market failure." CFA Comments 88, 93 (emphasis added). CFA identifies no reason to think, however, that significant numbers of consumers are *requesting* such extravagant capabilities, let alone that they are eager to pay prices commensurate with the heavy costs of building such capabilities into broadband networks. Obviously, without consumer demand for a product, there can be no market failure regarding that product.

38 FTC Net Neutrality Report, *supra*, at 119; *see id.* at 113-18.

neutrality regulation is unnecessary.[39] And empirical studies show that, each time the government has *relaxed* regulatory burdens on wireline broadband providers, those providers have responded by expanding their networks and dropping their prices.[40] That is why the commenters most concerned with closing the "digital divide"—with extending the benefits of broadband to rural and low-income communities—oppose net neutrality regulation.[41]

B. Business-to-Business Agreements for the Provision of Performance-Enhancing Services Are Not "Discriminatory," Much Less Wrong, and Cannot Fill the Empirical Void in Pro-Regulation Advocacy.

Some pro-regulation commenters argue that their inability to cite an existing market failure should be irrelevant because broadband providers have already "expressed an intention" to engage in a "discriminatory leveraging of market power" by unilaterally charging for access to their networks.[42] In fact, broadband providers have expressed no such intention. What they do propose is to engage in efficient cost-recovery from both sides of this two-sided market through voluntary commercial agreements, and there is nothing remotely "discriminatory" about such cost-recovery, let alone inappropriate. As discussed below, the pro-regulation commenters' frequent references to "discrimination" concerns are, for the most part, conceptually incoherent.

It is necessary at the outset to clear up two areas of confusion on which the pro-regulation commenters seek to capitalize. First, citing the remarks of AT&T's former CEO, these commenters suggest that broadband networks wish to act as "unwanted gatekeepers" that impose

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39 *See* OECD Report, *supra*, at 5.

40 *See* Thomas W. Hazlett, *Broadband Regulation in the United States: An Empirical Assessment* (June 14, 2007) (attached to Verizon's comments as Appx. A); Thomas W. Hazlett, *Rivalrous Telecommunications Networks With and Without Mandatory Sharing*, 58 Fed. Comm. L.J. 477 (2006).

41 *See* pp. 46-47 & n.152, *infra*.

42 Google Comments 24.

"unilateral" charges on all applications and content providers for access to end users.[43] This is fundamentally inaccurate. AT&T is not proposing to levy unilateral charges on content or applications providers for the delivery of particular content or applications to end users over a best-efforts Internet connection.[44] Instead, to justify multi-billion-dollar expenditures on next-generation networks, broadband providers like AT&T propose to enter into commercial agreements with providers that *wish* to purchase performance-*enhancing* services for QoS-needy applications and content. As discussed in our opening comments (and below), such agreements are the most efficient way to allocate scarce network resources in the interests of consumers, and they are far more equitable to consumers—particularly low-income and price-sensitive consumers—than forcing broadband providers to recover all of their costs from consumers alone.

Second, because broadband providers are investing billions to supplement these performance-enhancement capabilities with greater bandwidth, there is no plausible concern that ordinary best-efforts Internet traffic will be consigned, in the parlance of net neutrality pundits, "to the digital equivalent of a winding dirt road."[45] To the contrary, such traffic will generally enjoy significantly *greater* absolute bandwidth than best-efforts Internet traffic receives over today's broadband connections.[46] As the FTC points out, "ISPs have incentives to maintain sufficient best-efforts service that allows access to all content and applications providers because

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43 *Id.* at 26-27.

44 *See* Arshad Mohammed, *SBC Head Ignites Access Debate*, Wash. Post (Nov. 4, 2005) (as a spokesman for then-SBC explained, Mr. Whitacre "was not talking about charging companies for letting customers access their Web sites. . . . 'SBC has not and will not block or limit access to lawful content or applications on the Internet . . . . Mr. Whitacre's comments are being misinterpreted. They were not made in the context of the public Internet, but rather SBC's $4 billion investment in its new fiber network to provide Internet-based video services[.]'").

45 Lawrence Lessig & Robert W. McChesney, *No Tolls on the Internet*, Wash. Post, June 8, 2006, at A23; *see, e.g.*, Google Comments 27.

46 *See* AT&T Comments 52-53.

the value of an ISP priority service to a provider would be affected by the size of the ISP's customer base," and "ISPs may lose subscribers if they do not provide sufficient access."[47] The market-research firm IDC likewise concluded in a June 2007 report that, from the perspective of broadband providers, "[t]he potential benefit realized from maintaining a scarcity of bandwidth so that facilities-based providers could auction off capacity to the highest bidder *pales in comparison to revenue opportunities associated with present and future consumer services*."[48] Indeed, there is no other plausible explanation for the billions of dollars that broadband providers are risking yearly on capacity upgrades to their networks.[49]

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47 FTC Net Neutrality Report, *supra*, at 91.

48 IDC, *U.S. Consumer Internet Traffic 2007-2011 Forecast: The Impact of Net Neutrality on Service Provider Infrastructure Investment*, at 8 (June 2007) ("IDC Report") (emphasis added); *see also* Section III.A, *infra* (discussing investment disincentives of regulation). Google cites a University of Florida paper purporting to show that net neutrality regulation would somehow increase incentives to invest in capacity upgrades. But even on its own terms, that paper (which addresses the incentives only of a hypothetical *monopolist*) cuts *against* Google's advocacy, because it concludes that consumers would either derive no benefit from net neutrality regulation or suffer losses. *See* Hsing Kenneth Cheng, *et al.*, *The Debate on Net Neutrality: A Policy Perspective* 29 (2007) (http://www.hearusnow.org/fileadmin/sitecontent/TheDebateonNetNeutrality.pdf); *see also* George S. Ford, *University of Florida Study Shows Only Winners from Network Neutrality Regulation to be Content Providers, Consumers Lose*, Phoenix Center, at 1 (2007) (http://www.phoenix-center.org/perspectives/Perspective07-01Final.pdf) ("[T]he conclusions of the Florida Study have been grossly misconstrued by network neutrality proponents . . . . [It] clearly shows that under no circumstances will consumer welfare be improved by network neutrality regulation. In fact, the Florida Study suggests that the only 'winners' from network neutrality regulation will be the Internet content providers—with broadband service providers and consumers being worse off (or, in some cases, unaffected).").

49 CFA absurdly claims that "major carriers like AT&T have adamantly stated their opposition to upgrading infrastructure." CFA Comments 77. In fact, AT&T is investing $6.5 billion in its IP-based Project Lightspeed network, which extends fiber-optic cable deep into individual neighborhoods, and billions more to quadruple the capacity of its global backbone network. *See* Dionne Searcey & Peter Grant, *AT&T Says Costs Rise for TV System's Launch*, Wall St. J., May 8, 2007, at B4; Craig Matsumoto, *AT&T Readies 40-Gig Backbone*, Light Reading (June 6, 2006) (http://www.lightreading.com/document.asp?doc_id=96564&site=globalcomm).

Thus, the only question is whether, in addition to providing their subscribers with this robust baseline connectivity, broadband providers may also sell performance-enhancing services to the applications and content providers that wish to buy them for use with particularly QoS-needy applications. The proponents of net neutrality regulation oppose such business-to-business arrangements on the ground that the government should force consumers alone to pay for any performance-enhancing services.[50] And they argue that any deviation from this consumer-pays-all approach—that is, any arrangement under which an applications or content provider agrees to pay a broadband provider for performance-enhancing services—would ipso facto "constitute *discriminatory* leveraging of market power."[51]

That contention rests on a gross misunderstanding of basic economics. "Broadband is a classic example of what economists call a two-sided industry" in that "providers must create a platform that is attractive to both consumers of Internet access and Internet content providers."[52] Two-sided markets are common throughout the economy, and intermediaries in such markets often recover their costs in part from each side whether or not they have "market power."[53] For example, national magazines in a crowded journalistic market often recover their costs both from subscribers and from advertisers.[54]

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50 *E.g.*, Google Comments 24.

51 *Id.*; *accord* Earthlink/New Edge Comments 7 (describing "pay-to-prioritize plans" as "discriminatory"); *see also* NASUCA Comments 18.

52 Statement of Timothy J. Muris, Foundation Professor, The George Mason University School of Law, Before the Workshop on Broadband Connectivity Competition Policy, U.S. Federal Trade Commission, at 21 (Feb. 28, 2007) (http://www.ftc.gov/opp/workshops/broadband/presentations/muris.pdf).

53 *See, e.g., id.* at 21-23.

54 *See id.*

Likewise, a broadband provider's recovery of its network costs from both sides of a two-sided market is not "discriminatory" (much less welfare-reducing). Just as a magazine does not "discriminate" by selling premium advertising space only to those companies that pay for it, neither does a broadband provider "discriminate" for or against anyone by offering performance-enhancing services only to those applications and content providers that wish to pay for them. As Alfred Kahn explains, net neutrality advocates are "guilty of using the term 'discrimination,' sloppily, to embrace mere *differences* in price for different qualities of service."[55] But under a performance-enhancement agreement, the applications or content provider is paying for a service that other providers do not pay for and thus do not receive. That is not "discrimination" in any meaningful economic sense. As discussed below, it is the compensated provision of a critical service that allocates scarce network resources to the uses most valued by consumers.

Of course, such arrangements do involve differential treatment of packets depending on their associated content and applications. But no one can seriously contend that such "discrimination" among types of Internet traffic is inherently problematic in any way. Even Google, for example, concedes that broadband networks should be free to "prioritiz[e]" packets associated with performance-sensitive applications[56] and that "the Internet today is not an absolutely 'neutral' place" because its constituent networks (presumably including Google's) "can and do distinguish routinely between various forms of traffic."[57]

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55 Statement of Alfred E. Kahn, Robert Julius Thorne Professor of Political Economy, Emeritus, Cornell University, before the FTC Workshop on Broadband Connectivity Competition Policy, at 4 (Feb. 13, 2007) (2/21/2007 rev.) (some emphasis omitted) (http://www.ftc.gov/opp/workshops/broadband/presentations/kahn.pdf).

56 Google Comments 22.

57 *Id.* at 4 n.6. In our opening comments, we identified three main types of net neutrality proposals: (i) a "dumb pipes" proposal, under which broadband networks would be required to treat all packets exactly the same, whether or not their associated applications are performance-sensitive; (ii) a proposal to ban broadband providers from entering into commercial agreements

Instead, Google asks the Commission to draw a regulatory line between what it calls "differentiation (acceptable) and discrimination (unacceptable)."[58] But there is no analytical content to that proposal, because these two words—"differentiation" and "discrimination"—are *synonyms*.[59] As discussed in Section II.C below, moreover, Google cannot be taken seriously in suggesting that "differentiation based on the ownership or affiliation of the content (who), or the source or destination of the content (the where)" should always be deemed "unacceptable,"[60] since this describes the uncontroversial business plans of the world's leading content delivery networks, as well as such potentially life-saving advancements as the development of prioritization capabilities for VoIP 911 calls. At bottom, therefore, Google, like pro-regulation advocate Timothy Wu, is merely asserting that discriminating among Internet packets is sometimes good and sometimes bad.[61] But Google, like Wu, never clearly explains how it would draw the line between "good" and "bad" packet discrimination, much less why the government (rather than the marketplace) should undertake to draw any such line—especially now, when no one has identified a market failure that could justify that inherently intrusive and investment-deterring regulatory quagmire (see Section III.C below).

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with applications and content providers for the compensated provision of performance-enhancing services; and (iii) a proposal to permit such agreements but to subject them to common carrier regulation (see Section III.C below). The opening comments reveal that no one who has thought seriously about the issue wants the Internet to treat all packets the same, and that the real debate in this proceeding therefore concerns the merits (and demerits) of proposals (ii) and (iii).

58 *Id.* at 39; *see also id.* at 26 (proposing dichotomy between "reasonable differentiation and unreasonable discrimination").

59 *See* FTC Net Neutrality Report, *supra*, at 71.

60 Google Comments 26, 39.

61 *See Keeping the Internet Neutral?: Tim Wu and Christopher Yoo Debate*, 59 Fed. Commun. L.J. 575, 577 (2007).

In sum, although pro-regulation commenters throw the word "discrimination" around for rhetorical effect, they never define what they mean by it, and for the most part they use the term incorrectly, to denote the *non*discriminatory practice of selling performance-enhancing services only to applications and content providers that pay for them. The economic concept of "price discrimination" arises here only in a much more limited respect, which only a handful of commenters address. These commenters acknowledge that broadband providers may properly charge content and applications providers for performance-enhancing services, but they ask the Commission to treat broadband providers as *common carriers* when they do so.[62] Under this approach, if a broadband provider sells a performance-enhancing service to one applications or content provider, it would have to publicize the details of the arrangement and offer to sell the same service, at the same price and on the same terms, to all similarly situated applications and content providers. That proposal asks the Commission to scuttle a series of recent orders in which it has concluded both that common carrier regulation of broadband providers is *unnecessary* and that such regulation would serve merely to *harm consumers* (because, among other considerations, price discrimination is often welfare-maximizing and pro-consumer). In Parts II and III below, we explain why the pro-regulation commenters have identified no basis for revisiting either conclusion—or for imposing any brand of net neutrality regulation.

II. THERE IS NO THEORETICAL NEED FOR NET NEUTRALITY REGULATION.

As discussed, the pro-regulation parties have responded with deafening silence to the Commission's request for *actual evidence* of any market failure. They thus fall back on half-baked theoretical speculation that "structural," rather than "behavioral," defects in the broadband

62 *See, e.g.*, BT Americas Comments 14-15; CDT Comments 10.

industry create a risk of some future market failure.[63] That speculation fares no better than the pro-regulation commenters' non-response to the Commission's request for hard facts about whether any market failure has yet arisen. Just as there is no empirical basis for net neutrality regulation, there is no legitimate theoretical basis either.

A. The Commission Has Correctly Determined that the Broadband Market Is Dynamic and Competitive.

The pro-regulation commenters argue at some length that broadband competition is insufficient to protect consumer interests, that the market is thus ripe for failure, and that the only solution is to treat broadband providers as heavily regulated utilities. Unfortunately for this line of argument, the *Commission* has repeatedly found, the *courts* have repeatedly affirmed, and the *FTC* has just concluded, too, that the broadband marketplace is young, dynamic, and competitive, and that regulating it would do more harm than good.[64]

The advocates of net neutrality regulation respond to these findings by asking the Commission to undertake a "significant course correction,"[65] by which they mean that the Commission should confess error and admit that all of its recent broadband deregulation orders were arbitrary and capricious. And they follow this up by impugning the Commission's honesty and competence. Google, for example, contends that "*any rational* policymaker" would "conclude that there is a major competition problem in the broadband market"[66]—a not-so-subtle slap at the Commission and now the FTC, which have both concluded the opposite. Google adds that, until others agree with it about the state of broadband competition, "productive dialogue

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63 Google Comments 10.

64 *See* AT&T Comments 47-50, 56-58 (citing FCC orders and court decisions approving them); FTC Net Neutrality Report, *supra*, at 10-11.

65 Open Internet Coalition Comments i; *see also* Google Comments 9.

66 Google Comments 15 (emphasis added).

effectively ceases."[67] The burden is on Google, however, to explain why the Commission should abandon its long line of judicially validated precedent, incur the severe litigation risks that such a dramatic reversal would create, and arbitrarily single out broadband providers for anachronistic regulation while preserving a regulation-free zone for all other companies in the Internet ecosystem (see Section IV below).

In any event, even if the Commission were addressing this issue on a clean slate, it would have to conclude—as the FTC just did—that the "young and dynamic" broadband marketplace is "moving in the direction of more, not less, competition" and—most tellingly of all—is characterized by "*declining prices for higher-quality service*."[68] As noted, over the past four years, AT&T has quadrupled the maximum speed of its top-tier residential DSL service (from 1.5 Mbps to 6 Mbps) while cutting the price of that service by 30% (from $49.95 to $34.95) and has simultaneously cut the price of its up to 1.5 Mbps DSL service by 60%.[69] Other broadband providers are likewise investing heavily each year to keep up with the demand for greater speeds at lower prices.[70] And market research firm IDC confirms that broadband providers have no incentive to "maintain[] a scarcity of bandwidth" and every incentive to pursue the "revenue opportunities associated with present and future consumer services" by continuing to expand network capacity as bandwidth demands increase. Against this backdrop, the absurd suggestion of some pro-regulation commenters that a "cozy duopoly of network owners" is "exploit[ing]

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67 *Id.* at 21.

68 FTC Net Neutrality Report, *supra*, at 10-11 (emphasis added).

69 AT&T Comments 62. AT&T took these steps before, and independently of, its commitment to lower prices *still further* in connection with its merger with BellSouth. *See* Mem. Op. and Order, *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, 22 FCC Rcd 5662, 5808 (2007) ("*AT&T-BellSouth Merger Order*").

70 AT&T Comments 62.

scarcity rather than creat[ing] abundance" and is "dribbl[ing] out capacity in small increments at high prices"[71] reads like a report from an alternate universe.

There is also nothing remotely "duopolistic," much less "cozy," about the broadband marketplace. Google tries to convey the opposite impression by analyzing concentration in the broadband industry as though the United States contained one monolithic Cable Company and one monolithic Telephone Company and by concluding, on that basis, that the industry's Herfindahl-Hirschman Index (HHI) is more than 5200.[72] This purported HHI analysis is flawed in several independent respects.

First, Google's HHI numbers do not describe any actual market because, of course, any given broadband provider accounts for only a modest fraction of the national broadband industry. In fact, no U.S. broadband provider has more than a 22% share of broadband subscriptions nationwide or more than a 3% share of global broadband subscriptions.[73] That fact has great significance for the net neutrality debate because, as Verizon and others have observed, the small *national* market share of any given broadband provider keeps it from causing the harm that net neutrality proposals are ostensibly designed to prevent: competitive injury to the essentially *national and international* markets for applications or content.[74] Indeed, some applications and content providers may well end up with more leverage than broadband providers in negotiations about the terms of access to broadband platforms. For example, as explained in our opening comments, Disney blocks each end user's access to its premium ESPN 360 site unless the end

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71 CFA Comments 11; *see also* Earthlink/New Edge Comments 1 ("Without UNE loop-based DSL services, duopoly pricing and other anticompetitive practices will continue to harm both residential and business consumers.").

72 Google Comments 11-12.

73 *See* Verizon Comments 51-52.

74 *See id.* at 49-52; FTTH Council Comments 59-60.

user's *broadband provider* pays a substantial fee to Disney—and Verizon pays that fee because it hopes to gain a competitive advantage over its broadband rivals.[75]

Second, even if it made sense to examine the broadband market on a locality-by-locality basis when assessing net neutrality proposals, despite the global scope of the allegedly threatened markets for applications and content, there would still be no basis for describing local markets as "cozy duopolies." Entrenched market concentration is typically characterized by constrained output, rising prices, and little head-to-head competition. Again, however, the broadband market features precisely the opposite phenomenon: *intense* competition among broadband providers that are investing billions to *expand* output (by increasing bandwidth and widening broadband footprints) while *slashing* prices.[76] Moreover, there is nothing hypothetical about the competitive threat posed by providers other than cable and wireline telephone companies:

> Out in the real world, . . . things are not proceeding according to script, at least for those who insist that what the Internet really needs is a brand-new layer of government regulation. [In August 2006], Sprint announced plans to spend as much as $3 billion building a nationwide WiMax network that would provide high-speed Internet access to 100 million consumers by 2008 . . . . Those who want to regulate broadband providers are saying that the phone and cable networks are too valuable and too hard to replicate for anyone to break up the duopoly. We guess Sprint didn't get the memo.[77]

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75 *See* AT&T Comments 91-92.

76 AT&T Comments 62; *see also* FTC Net Neutrality Report, *supra*, at 101 ("Prices for DSL broadband services have . . . fallen rapidly as the telephone companies have competed aggressively to take market share from the cable companies. . . . Quality-adjusted cable modem prices too have fallen.").

77 *Wi-Fi to the Max*, Wall St. J., Aug. 9, 2006, at A10.

In addition to Sprint, a host of other competitive providers, ranging from Clearwire to T-Mobile to WISPs to HughesNet, are also transforming the broadband landscape, as our opening comments describe in detail.[78]

In any event, traditional market-concentration figures are not a meaningful basis for competitive analysis in a market that, like this one, is highly dynamic and subject to rapid technological change.[79] It is ironic that Google misses this point, because according to one analyst's estimates, the HHI of the Internet search market, which Google dominates, is higher than the broadband industry's HHI would be even if there *were* only one Telephone Company and one Cable Company in the United States.[80] In this respect as well, the logic of Google's own regulatory advocacy would (if valid) support heavy regulation of Google itself.

Finally, even if any local broadband market *were* excessively concentrated, the proper response would be to create incentives for additional entry into that market, not to *deter* such entry by depriving broadband providers of needed revenues or by forcing them to commoditize their services. The best way to encourage intermodal entry in any market is to avoid margin-reducing regulation: if the incumbents "succeed too well," and earn large margins, the prospect of similarly healthy margins will encourage new rivals to enter.[81] Indeed, even Google

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[78] AT&T Comments 58-62. AT&T incorporates by reference its extensive analysis of wireless competition set forth in its comments (filed Apr. 30, 2007) and reply comments (filed May 15, 2007) in opposition to the Skype petition for applying new regulations to the wireless industry (RM-11361).

[79] *See generally* Richard Posner, *Antitrust in the New Economy*, 68 Antitrust L.J. 925, 930 (2001); *Time Warner Entertainment Co., L.P. v. F.C.C.*, 240 F.3d 1126, 1134 (D.C. Cir. 2001).

[80] *See* Scott Cleland, *Dismantling Google's reasons why NN should not apply to them*, Precursor Blog, May 16, 2007 (http://www.precursorblog.com/node/398).

[81] *See, e.g.*, Report and Order and Notice of Proposed Rulemaking, *Expanded Interconnection with Local Telephone Company Facilities*; *Amendment of the Part 69 Allocation of General Support Facility Costs*, 7 FCC Rcd 7369, 7451 ¶ 172 (1992) (excessive price regulation will prevent "the benefits of competition" by "giv[ing] the new entrants false

recognizes the policy imperative to encourage "diverse forms of platform competition" rather than "'shallow' (price and speed) competition."[82] But "shallow" competition is precisely what emerges from government efforts to open markets artificially through network sharing or "open access" rules.[83] If "'deep' (business model) competition"[84] is the desired end, then free market forces are the necessary means, as discussed in Section III below.

B. Competition Precludes, Not Increases, Any Need for Regulation.

Recognizing that they have no basis for contesting the Commission's findings of broadband competition, the proponents of net neutrality regulation fall back on the alternative argument that even competition "may not be sufficient to constrain anticompetitive or discriminatory practices in a vertically-integrated market," that "competition may even *increase* the likelihood that existing broadband providers" will "exclude or discriminate against competitors in the complementary market of Internet services," and that net neutrality regulation will thus be warranted even with "the addition of several [more] broadband competitors."[85] These commenters thus lay bare their real agenda: *permanent* regulation of broadband providers for the benefit of particular content and applications providers, no matter how competitive the

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economic signals"), *vacated on other grounds and remanded, Bell Atlantic Tel. Cos. v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994); *see also Verizon Communications Inc. v. Law Offices of Curtis V. Trinko LLP*, 540 U.S. 398, 407-08 (2004); Supplemental Order Clarification, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 9587, 9597 ¶ 18 (2000), *aff'd*, *Competitive Telecomms. Ass'n v. FCC*, 309 F.3d 8 (D.C. Cir. 2002).

82 Google Comments 19; *see also id.* at 14.

83 *See, e.g., United States Telecom Ass'n v. FCC*, 290 F.3d 415, 424 (D.C. Cir. 2002).

84 Google Comments 19.

85 *Id.* at 16; *accord* Open Internet Coalition Comments 8-9 ("facilities-based intermodal competition is not a reliable safeguard against destructive discrimination"). It is highly ironic that Google would raise such concerns about vertical integration in the first place, given that it owns not just the dominant search engine and the dominant video file-sharing service (YouTube), but also the world's largest private CDN.

broadband market becomes or how much consumers suffer from regulatory intervention. This position flies in the face of Congress's call for preservation of "the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation."[86] It is also untenable as an economic and policy matter.

To begin with, "the notion that vertical integration tends generally to be anticompetitive has been widely rejected in antitrust law and economics for several decades."[87] As explained in our opening comments, even an unregulated platform *monopolist* normally has little incentive to discriminate anticompetitively against unaffiliated applications and content providers because, with well-defined exceptions, such discrimination would entitle the monopolist to no profits it could not obtain anyway from its own subscribers.[88] As we further explained, the risk that platform providers would engage in anticompetitive discrimination is even more attenuated where, as in this context, the platform market is dynamic and competitive.[89] In the face of platform competition, a platform provider lacks not only the incentive, but also the ability, to degrade the value of its platform by harming competition in the complementary markets for applications and content.

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86 47 U.S.C. § 230(b)(2); *see also* Pub. L. 104-104, Title VII, § 706, 110 Stat. 153 (47 U.S.C. § 157 note) (instructing FCC to follow a policy of "regulatory forbearance" where needed to "remove barriers to infrastructure investment").

87 FTC Net Neutrality Report, *supra*, at 70.

88 AT&T Comments 67-68.

89 *Id.* at 67.

Google and its allies[90] nonetheless try to make a vice of competition itself. They argue that, although "[a] single monopolist may refrain from [anticompetitive] tactics due to the so-called 'one monopoly rent' rule," that rule "becomes less relevant," and the incentives to discriminate thus become greater, "[a]s the high-speed ISP market *moves from monopoly to competition*."[91] This argument is every bit as nonsensical as it sounds. On inspection, the "risk" that these commenters fear from greater broadband competition is not a risk of genuinely anticompetitive conduct that could reduce consumer welfare, but the possibility that each broadband provider will try to eke out "a competitive position in the primary market by differentiating itself" from its competitors.[92] Product differentiation, however, is a boon to consumers in any market, from cars to videogame consoles, and it is no less desirable in the market for broadband Internet access.[93] Indeed, as Christopher Yoo observes, permitting such differentiation is the most effective way to keep the broadband access market "from devolving into [a] natural monopol[y]."[94] And as Michael Katz and Benjamin Hermalin explain in their exhaustive quantitative analysis of this issue, "consumers at the bottom of the market—the ones

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90 These allies include the ostensibly independent organizations that Google funds, such as the "Open Internet Coalition," which "shed the excess pounds of Microsoft, Yahoo, and Amazon" once Google determined that it was "too burdensome . . . to have to accommodate these more reasonable and less-regulatory members of the previous ItsOurNet coalition." Scott Cleland, *Welcome back to the "slimmed-down" Open Internet Coalition II*, PrecursorBlog, May 24, 2007 (http://www.precursorblog.com/node/410); *see also* note 180, *infra* (quoting concerns of net neutrality activists that the Open Internet Coalition is a shill for Google's corporate agenda).

91 Google Comments 16-18 (emphasis added).

92 *Id.* at 17.

93 AT&T Comments 73.

94 Christopher Yoo, *Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. Telecomm. & High Tech. L. 23, 61 (2004).

that single-product restrictions typically are intended to aid—are almost always harmed by the restriction" on differentiation among product lines.[95]

Significantly, a diversified Internet marketplace is not the same as a "balkaniz[ed]" Internet—the implausible doomsday scenario invoked by net neutrality pundits, under which the Internet would supposedly break apart into separate walled gardens as each provider blocks the applications or content offered by other providers.[96] As discussed, no major broadband provider in the United States has ever engaged in a single documented instance of anticompetitive "blocking" or "degradation" of Internet content or applications, and there is no basis for concern that any of them will suddenly begin to do so.[97] And even if there were such a concern, it would already be addressed by the Commission's existing *Broadband Policy Statement*; it could not logically support supplementing the *Policy Statement* with intrusive new restrictions on consensual business-to-business agreements for the provision of performance-enhancing services.

Finally, citing the Commission's experience with excessive CLEC access charges in the early 2000s, the pro-regulation advocates claim that a "terminating access monopoly" can create market failures *even in highly competitive markets*—and that it will do so here unless the

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95 Benjamin E. Hermalin & Michael L. Katz, *The Economics of Product-Line Restrictions with an Application to the Network Neutrality Debate*, Competition Policy Center, at 2 (2006) (http://repositories.cdlib.org/iber/cpc/CPC06-059) ("*Economics of Product-Line Restrictions*").

96 *E.g.*, Google Comments 25; *see id.* at 17-18; *see also* Computer & Communications Industry Ass'n Comments 4-5.

97 AT&T Comments 68-69. Indeed, the "walled garden" approach to on-line services was tried for many years and ultimately succumbed to the widespread consumer preference for full-blown Internet access, particularly once broadband replaced dial-up as the predominant means of such access. *See, e.g.*, Edward C. Baig, *AOL subscribers: Stay and pay, or flee and get it free*, USAToday.com, July 6, 2005 (http://www.usatoday.com/tech/columnist/edwardbaig/2005-07-06-aol-stay-or-go_x.htm). There is no reason to expect that this embedded consumer preference will change.

Commission adopts net neutrality rules.[98] This analogy to the CLEC access charge controversy is fundamentally misconceived.

First, the problem underlying that controversy arose from *Title II regulation*, not from free market dynamics, as the Commission itself has acknowledged.[99] Before the Commission intervened in 2001, a CLEC could charge radically inflated rates for terminating access traffic only because the Commission's Title II rules (i) entitled the CLEC to tariff its termination rates unilaterally; (ii) compelled interexchange carriers to interconnect with the CLEC and hand off all terminating traffic bound for its customers; and (iii) required those IXCs to pay the tariffed termination rates in the process, no matter how objectionably high they might be.[100] In addition, Title II rules precluded these IXCs not only from sending the bill to the called parties (*i.e.*, to the CLEC's end users), but also from passing the inflated termination charges through to the specific calling parties who placed these particular calls.[101] The net result of these Title II regulations was to make the CLECs' subscribers completely indifferent to the level of these termination charges—and thus to preclude any market response to them. The Commission corrected this regulation-induced market failure by "mandatorily detariff[ing]" CLEC access rates above certain levels and forcing CLECs to "*negotiate* [any] higher rates with the IXCs"—thereby subjecting those rates, for the first time, to the discipline of market forces.[102]

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98 *E.g.*, Google Comments 19-21; Open Internet Coalition Comments 9-11.

99 *See* Seventh Report and Order, *Access Charge Reform*, 16 FCC Rcd 9923, ¶ 2 (2001) ("*CLEC Access Charge Order*") ("[W]e limit the application of our tariff rules to CLEC access services in order to *prevent use of the regulatory process* to impose excessive access charges on IXCs and their customers.") (emphasis added).

100 *See id.*

101 *See* 47 U.S.C. § 254(g).

102 *CLEC Access Charge Order* at ¶ 3 (emphasis added).

The broadband market contains no such regulatory distortions. A broadband network cannot file tariffs, nor can it force applications or content providers to interconnect with it. Indeed, as the ESPN 360 example illustrates, such providers sometimes block their applications and content from any broadband network that does not pay *them* an interconnection fee.[103] Moreover, unlike CLECs terminating PSTN access traffic, a broadband network could face complaints from *its own end users* if it sought to impose unreasonable charges on applications and content providers, because (unlike IXCs) those providers are free to pass at least a portion of those charges through to *the same end users*. By the same token, a broadband network would face significant customer complaints and ultimately defections if it degraded the quality of its service by relegating certain applications and content to a proverbial "dirt road," because these harms would be inflicted on its *own customers*. In short, the broadband market contains none of the features that led to a regulation-induced market failure in the CLEC access charge context. And there is no reason to doubt that market forces would produce an efficient, pro-consumer result in this context. By analogy, since the Commission clarified that wireless carriers have no regulatory entitlement to impose unilateral terminating access charges,[104] no one has alleged that they have somehow extracted unreasonable termination rates by means of any "terminating access monopoly."

In any event, the analogy to the "terminating access monopoly" in the telephone network fails for the independent reason that, unlike CLECs in the access charge context, broadband providers have expressed no intention to impose *unilateral* charges on any applications or content provider for the delivery of particular applications or content to the broadband provider's

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103 *See* pp. 22-23, *supra*.

104 *See* Declaratory Ruling, *Petitions of Sprint PCS and AT&T Corp. for Declaratory Ruling Regarding CMRS Access Charges*, 17 FCC Rcd 13192 (2002), *appeal dismissed sub nom. AT&T Corp. v. FCC*, 349 F.3d 692 (D.C. Cir. 2003).

end users over a best-efforts Internet connection. Indeed, if a broadband network tried to enforce such unilateral charges by blocking the applications and content of providers that refused to pay, the aggrieved providers would undoubtedly argue that the broadband network had violated the principles of the Commission's existing *Policy Statement*. Again, the question in this proceeding is not whether a broadband provider may impose unilateral charges, but whether it may negotiate mutually beneficial *agreements* with providers that *request* performance-enhancing services for QoS-needy applications and content. By definition, these voluntary agreements work to the benefit of both parties to the transaction. Market forces are perfectly capable of ensuring that such voluntary agreements are efficient and pro-consumer, and *post hoc* remedies are more than adequate to address the slim, abstract possibility of any future market failure. As the FTC has concluded, "the competitive issues relating to last-mile access to consumers that have been raised in the network neutrality debate largely can be addressed through antitrust enforcement."[105]

C. Competition for the Provision of Performance-Enhancing Services Provides an Additional Check Against Anticompetitive Conduct.

As discussed in our opening comments, net neutrality regulation is unnecessary not just because *consumers* have choices among broadband providers, but also because *applications and content providers* have choices among suppliers of performance-enhancing services.[106] For example, the leading providers of applications and content today can secure far better performance than their competitors by purchasing access to (or building) content delivery networks, which circumvent Internet congestion and speed preferred packets almost instantaneously to dispersed locations near end users across the globe. Google, which owns one of the most powerful CDNs of all, is thus forced to concede that "the Internet today is not an

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105 FTC Net Neutrality Report, *supra*, at 121.

106 *See* AT&T Comments 63-66; *accord* FTTH Council Comments 60.

absolutely 'neutral' place, in that the various servers, routers, and content delivery networks that comprise it can and do distinguish routinely between various forms of traffic."[107]

The central role of CDNs obliterates any argument that the Internet serves as a radical equalizer of wealth disparities and that net neutrality regulation is needed to preserve it as such. The Open Internet Coalition nonetheless continues to argue that "[p]olicymakers should ensure that the next Google, Facebook, or YouTube can seek funding based on the merit of its technology and business model, *not whether it is able to strike deals with network operators.*"[108] This is faux populism at its worst. Even if net neutrality rules were adopted, any content or applications provider that hopes to rival "Google, Facebook, or YouTube" would need to "strike deals with network operators"—and specifically with CDNs like Akamai or Limelight (unless, like Google, they have the prodigious resources needed to build their own CDNs). All else held equal, providers that can afford to buy CDN services (or to build their own CDNs) will give their end users better on-line experiences than providers that cannot afford to do the same, and they stand a better chance of succeeding in the marketplace. That, indeed, is why CDNs have prospered so brilliantly in the Internet ecosystem. No one suggests, however, that this is a problem.

The question in this proceeding is thus not whether applications and content providers should have to pay for enhanced performance in their connections with end users—because they

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[107] Google Comments 4 n.6.

[108] Open Internet Coalition Comments 4 (emphasis added). NASUCA likewise quotes this passage from a New York Times editorial: "this democratic Internet would be in danger if the companies that deliver Internet service changed the rules so that Web sites that pay them money would be easily accessible, while little-guy sites would be harder to access and slower to navigate." NASUCA Comments 24. Of course, CDNs are "companies that deliver Internet service," and they have long performed precisely this function of favoring "Web sites that pay them money" over "little-guy sites." No "rules" were "changed" in the process, and the Internet remains as "democratic" as it has ever been.

already do—but whether CDNs will face additional competition from broadband networks in the provision of performance-enhancing services. As our opening comments explained, CDNs are not the only means, and are sometimes not the most efficient means, of optimizing the performance of particular applications and content. As bandwidth needs rise exponentially with the next generation of IP-based services, the Internet can function properly only if the competitive options for enhancing the performance of QoS-needy applications expand to include not just CDNs, but also the performance-enhancement techniques offered by broadband providers. Net neutrality regulation, however, would irrationally suppress competition for the provision of performance-enhancing services to applications and content providers.

Not surprisingly, the most prominent advocates for shutting off such competition include companies, like Google, with enormous, capital-intensive CDNs of their own. But they identify no neutral basis for that outcome. Google's rationale for concluding that CDN-based performance-enhancement services are acceptable, whereas broadband QoS services are unacceptable, is indecipherable. CDN services, Google claims, "do not involve *discriminatory conduct* stemming from the carriers' control over last-mile facilities."[109] As discussed in Section I.B above, however, Google's invocation of "discrimination" in this context is empty. A CDN obviously does what Google insists broadband providers should not do: it differentiates among Internet traffic "based on the ownership or affiliation of the content (who), or the source or destination of the content (the where)."[110] Indeed, that is a CDN's very purpose: companies that pay for CDN functionality receive it; those that do not pay for such functionality must deal with the potential for Internet congestion and slower delivery to end users. And vertically integrated companies like Google have deployed CDNs of their own that give them performance

109 Google Comments 23 (emphasis added).

110 *Id.* at 26.

advantages over their smaller competitors. Again, no one suggests that any of these paid-for performance advantages are problematic.

There is likewise no merit to Google's claim that broadband providers, unlike CDNs, present a "threat of unilateral gatekeeping."[111] By this, Google can only be arguing that a broadband provider might threaten to block or degrade the applications or content of providers that do not purchase performance-enhancing services and instead choose to deliver packets over a best-efforts Internet platform. Again, that is not a legitimate concern, both because there is no empirical support for it and, just as important, because the existing principles in the Commission's *Broadband Policy Statement* address this issue already. Invoking concerns about anticompetitive blocking and degradation cannot logically support proposals for adding *new* principles *beyond* those already in the *Policy Statement.*

III. NET NEUTRALITY REGULATION WOULD HARM CONSUMERS.

As discussed in our opening comments, net neutrality rules would be not only unnecessary, but affirmatively harmful to consumer interests. They would discourage broadband investment, raise end user prices with an enforced consumer-pays-all rule, and deprive consumers of the full benefits of the next generation of bandwidth-intensive services.[112] Nonetheless, the pro-regulation commenters suggest that, even if there is no demonstrated need for net neutrality rules, such rules should be implemented anyway, just as owners of "high-rise buildings" act prudently when they install "sprinkler systems and other precautions" to guard against the risk of fires.[113]

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111 *Id.* at 4 n.6.

112 *See* AT&T Comments 71-85.

113 Open Internet Coalition Comments 11 n.20.

This analogy is profoundly misguided. First, unlike the anticompetitive conduct imagined by pro-regulation advocates, fires are real, not hypothetical: they have actually struck high-rise buildings. Second, whereas "sprinkler systems" come with easily ascertainable costs and do nothing to impair the value of a building as a whole, net neutrality rules would inflict far-reaching, unpredictable, *structural* costs on the entire Internet ecosystem. As the FTC explained in its recent net neutrality report, "[n]o regulation, however well-intended, is cost-free, and it may be particularly difficult to avoid unintended consequences here, where the conduct at which regulation would be directed largely has not yet occurred."[114] That is why the Commission has long shielded information services from the seemingly innocuous—but ultimately quite intrusive—"common carrier" regulation of Title II, and why it has exempted all broadband Internet access services from such regulation in a series of recent orders.[115] It is also why Congress itself has directed the Commission to regulate only as a last resort, after it has been firmly established that a market failure exists.[116] The Commission could impose net neutrality regulations only by defying that statutory mandate—and only by undermining consumer welfare.[117]

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114 FTC Net Neutrality Report 155.

115 AT&T Comments 47-48, 55 n.142 (discussing *Wireline Broadband Order* and similar orders).

116 *See* AT&T Comments 47-50; *see, e.g.*, 47 U.S.C. §§ 160, 230(b)(2); Mem. Op. and Order, *Petition for Forbearance of the Verizon Tel. Cos. Pursuant to 47 U.S.C. 160(c)*, 19 FCC Rcd 21,496, ¶ 24 (2004).

117 Several commenters suggest that net neutrality regulation must not be too onerous for broadband providers because, they say, AT&T "volunteered" for it in connection with its recent BellSouth merger. *E.g.*, Google Comments 39. A leading pro-regulation advocate, however, has offered a far more candid description of that merger condition. As Gigi Sohn of Public Knowledge described the condition after successfully pressing for it at the Commission: "Yeah, it was extortion, but that's just the way it is. . . . It was all for a good reason. I was happy to be a part of that extortion." *Yada Yada Yada: Net Neutrality Season Returns to Washington*, CableFax Daily, Jan. 25, 2007 (http://www.cable360.net/cfax/data/21755.html). In all events,

A. By Forcing the Commoditization of Broadband Networks and Creating Regulatory Uncertainty, Net Neutrality Regulation Would Thwart Healthy Investment Incentives.

The first step in understanding the consumer harms threatened by Internet regulation is to clear away one particularly irresponsible analogy often invoked by the proponents of such regulation. Broadband providers are properly analogized not to "unwanted gatekeeper[s],"[118] as Google calls them, but to indispensable bridge-builders. As all commenters appear to agree, the United States needs more and better bridges connecting the Internet to individual end users throughout the nation. It needs such bridges not just to handle the exponentially increasing traffic flow associated with the new generation of video and other bandwidth-intensive applications, but also to close the "digital divide" between communities that do, and those that do not, have adequate broadband access to the Internet.

The question is how to ensure that those bridges get built. In proposing heavy regulation of the Internet, CFA and others rail against private enterprise as though government itself could will these bridges into existence simply by adding a few more lines to the Code of Federal Regulations.[119] In fact, however, the main bridge-builders are private companies that operate in a highly volatile competitive and technological environment—and can thus build these assets only at substantial risk to their financial integrity. As revealed by the capital expenditure budgets of the leading broadband providers, it costs enormous sums to create high-capacity networks with the sophisticated traffic controls needed to handle the flood of next-generation performance-

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AT&T submitted to that condition only because it is temporally (and otherwise) limited. *See AT&T-BellSouth Merger Order*, Appx. F, at 5814-15.

[118] Google Comments 27; *see also* Open Internet Coalition Comments i; CFA Comments 9.

[119] *See, e.g.*, CFA Comments 33 ("What is in the short term financial interests of the network operator is a disaster for the long term interests of the consumer, the citizen, the innovator, and the information economy as a whole.").

sensitive applications and content. No one is guaranteeing that those investments will pay off, and Wall Street has reacted with some skepticism that they will.[120]

As our opening comments explained, the only way to ensure that broadband providers maintain appropriate incentives to build efficient high-capacity networks *despite the risks* is to create a stable deregulatory environment, permit Internet-based companies to explore new business models, and avoid artificially commoditizing broadband networks through one-size-fits-all non-discrimination rules.[121] Net neutrality regulation would thwart all three preconditions to infrastructure investment. *First*, as discussed in Section III.C below, it would create massive disputes about how to distinguish between "good" and "bad"[122] packet differentiation, and it would equal or exceed the 1996 Act in its profligate generation of litigation costs and regulatory uncertainty.[123] The proponents of net neutrality regulation make no serious effort to deny this point. *Second*, as discussed in Section III.B below, the consumer-pays-all rule favored by some commenters would not only raise consumer prices, but also depress investment incentives by

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120 *See, e.g.*, Yinka Adegoke (Reuters), *Comcast sees cable rev rising, capex steady*, May 1, 2007 (http://today.reuters.com/news/articleinvesting.aspx?type=companyNews&storyid=220959+01-May-2007+RTRS&WTmodLoc=InvArt-L2-CompanyNews-3) (reporting that "Comcast shares fell more than 3 percent on Feb. 1 when the company gave a higher than expected outlook of $5.7 billion on capital spend for 2007," and quoting Sanford Bernstein analyst as explaining that "Comcast can talk till it's blue in the face about what the marginal return on investor capital is, but investors are so nervous about capital spending that they're almost hoping for slower growth"); Ed Gubbins, *Lehman: Verizon may want to rethink FTTP*, Telephony Online, Jan. 4, 2006 (http://telephonyonline.com/fttp/news/lehman_verizon_fttp_010406/) ("[t]he market is very skeptical of [Verizon's] FiOS spending"); Knowledge@Wharton, *Verizon's High-Speed Network: If They Build It, Will You Come?* (Mar. 21, 2007) (http://knowledge.wharton.upenn.edu/article.cfm?articleid=1689) (quoting Wharton professor Kevin Werbach: "Verizon is making a smart long-term bet on fiber to the home, but it's a risky bet. The capital costs are substantial and the payback scenarios are uncertain").

121 AT&T Comments 71-85.

122 *Keeping the Internet Neutral?: Tim Wu and Christopher Yoo Debate*, 59 Fed. Commun. L.J. 575, 577 (2007) (quoting Wu).

123 *See, e.g.*, FTTH Council Comments 67-71; IDC Report, *supra*, at 7 (warning of "operational paralysis" in the face of regulatory uncertainty if net neutrality rules are adopted).

depriving broadband networks of an efficient source of cost recovery: namely, consensual performance-enhancement agreements with the applications and content providers that deliver large volumes of QoS-needy traffic.

Third, if there were ever any doubt that net neutrality regulation would kill healthy investment incentives by commoditizing the services of each and every broadband provider, that doubt has now been dispelled by the comments of the self-styled consumer advocates. As those comments make clear, net neutrality would require choosing "standardization" over "differentiation" on the theory that "network diversity will result in a patently inferior outcome."[124] This call for enforced broadband "standardization" could be a plausible policy option only if regulators had concluded that the broadband market is a natural monopoly (or duopoly) *and* that the construction and maintenance of next-generation broadband facilities should be funded either by taxpayer dollars, as in some countries, or by rate-of-return regulation. As noted, however, the Commission has concluded—and the courts have confirmed—that the broadband market is dynamic and competitive and that it should be treated as such. Indeed, any prediction that the broadband market will end up as a natural monopoly or duopoly, if taken seriously by policymakers, would be a self-fulfilling prophecy, because a regime of forced

[124] CFA Comments 101, 120 (formatting altered). Indeed, the predominant theme of CFA's comments is a bizarre nostalgia for the days of slow dial-up Internet access, in which consumers had their pick of many different (equally slow) ISPs precisely because they had to use the circuit-switched telephone network to get on-line. CFA evinces no awareness that the arrival of affordable broadband technology, rather than any regulatory shift, made it sensible for the underlying transmission providers to perform many of the technological functions traditionally provided by dial-up ISPs. *See, e.g., id.* at 64-68; *accord* Open Internet Coalition Comments 1-2. Those ISPs, such as AOL, thus had to find other business plans, but consumers obviously benefited from this market-based migration from narrowband to broadband.

standardization could induce an otherwise dynamic and competitive broadband market to "devolv[e] *into* [a] natural monopol[y]."[125]

More generally, the Internet has succeeded precisely because the government has entrusted consumer interests to market forces, private entrepreneurial vision, and successive waves of creative destruction.[126] There is no reason to replace that free-market approach with the utopian cyber-socialism of net neutrality regulation. The surest way to kill off broadband investment—and exacerbate the digital divide—is to pretend that broadband providers are coddled natural monopolies when, in fact, they are indispensable but financially unprotected bridge-builders making high-risk multi-billion-dollar gambles on the uncertain future of technology.[127]

Finally, a few pro-regulation advocates suggest that broadband providers are somehow immune from the laws of economics and would thus make the same risky and expensive infrastructure investments even if net neutrality regulation were adopted.[128] Again, however, that position runs headlong into the Commission's own precedent. In order after order, the Commission has found that economic regulation of broadband access networks "constrain[s] technological advances and deter[s] broadband infrastructure investment by creating

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125 Yoo, *Would Mandating Broadband Network Neutrality Help or Hurt Competition?*, *supra*, at 61 (emphasis added); *see also* Hermalin & Katz, *Economics of Product-Line Restrictions*, *supra; see* AT&T Comments 71-72 (explaining economic dynamic).

126 *See generally* Posner, *Antitrust in the New Economy*, *supra*, at 930; Joseph Schumpeter, *Capitalism, Socialism and Democracy*, 82-85 (Harper ed. 1975) (1942).

127 As Lawrence Lessig has candidly acknowledged (in another context): "Like law professors, [lawyers'] advice lives largely protected from the market. They justify what they do in terms of 'right and wrong,' while everyone else has to justify their work in terms of profit." Lawrence Lessig, *LucasFilm's Phantom Menace*, Wash. Post, July 12, 2007, at A23 (http://www.washingtonpost.com/wp-dyn/content/article/2007/07/11/AR2007071101996.html?hpid=opinionsbox1).

128 *See, e.g.*, Google Comments 30-32.

disincentives to the deployment of facilities capable of providing innovative broadband Internet access services" and thus violates "Congress' clear and express policy goal [in Section 706] of ensuring broadband deployment, and its directive that we remove barriers to that deployment[.]"[129]

If further confirmation of this point were needed, the FTC recently supplied it, explaining that net neutrality regulation "may well have adverse effects on consumer welfare" because, among other considerations, "[b]roadband providers that cannot differentiate their products or gain new revenue streams may have reduced incentives to upgrade their infrastructure."[130] A recent Brookings Institution analysis similarly confirms that "[t]he virtuous cycle of capacity investments leading to new services and competition[,] which in turn helps drive increased demand and traffic[,] which in turn leads to still more investment in facilities[,] risks being derailed if the firms investing in such infrastructure cannot reasonably expect to recover their economic costs, including earning a fair, risk-adjusted return on investment."[131] And the Brookings analysis concludes that net neutrality rules in particular would derail that virtuous cycle because they would "restrict carriers' ability to offer differentiated services to address the needs of handling multimedia traffic" and to "recover[] the costs [incurred] from meeting the diverse requirements of broadband consumers."[132]

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129 Report and Order, *Appropriate Framework for Broadband Access to Internet over Wireline Facilities*, 20 FCC Rcd 14853, ¶¶ 19, 44 (2005); *see also* AT&T Comments 47-50, 56-58 (citing FCC orders).

130 FTC Net Neutrality Report, *supra*, at 160.

131 Robert Crandall, William Lehr & Robert Litan, *The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data*, Brookings Inst., at 16 (June 2007) (http://www3.brookings.edu/views/papers/crandall/200706litan.pdf).

132 *Id.*

Likewise, market-research firm IDC has found that, if net neutrality regulation were adopted, "it would almost certainly delay broadband upgrades" because broadband providers would "associate net neutrality with the onerous unbundled network element regulation coming out of the 1996 Telecom Act," and the industry would descend into "operational paralysis while the facilities-based providers figured out what they could and could not do."[133] Moreover, "[s]hould this occur, facilities-based based providers would be making strategic decisions based on *how little* investment they have to make[.]"[134] In contrast, IDC concluded, "*[w]ithout* net neutrality regulation, . . . the competitive pressures encouraging broadband service differentiation would cause broadband infrastructure upgrading and investment to accelerate rather than lag."[135]

B. Net Neutrality Regulation Would Raise Consumer Prices and Exacerbate the Digital Divide.

The net neutrality agenda favored by a number of commenters, including Google, would include a flat ban on any commercial arrangement under which any Internet-based company agrees to compensate a broadband network provider for the quality-of-service enhancements that help make performance-sensitive applications function properly as network congestion increases.[136] Closing off this revenue source would not only depress the investment incentives of

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133 IDC Report, *supra*, at 7.

134 *Id.* (emphasis added).

135 *Id.* (emphasis added).

136 *See, e.g.*, Google Comments 22. Although Google has been the most vocal corporate exponent of this position, its comments are muddled on the issue. On the one hand, Google proposes a regime under which "broadband providers can collect fees from their end user customers, but [cannot] impose access fees *unilaterally* on non-customer Web companies[.]" *Id.* at 23 (emphasis added; formatting altered). Under this formulation, broadband network providers presumably could *negotiate* agreements with *willing* content and applications providers for the provision of performance-enhancing services. Yet, at the same time, Google advocates a flat ban on such commercial agreements when it endorses the Snowe-Dorgan bill (*see* Google

broadband providers, as discussed above, but raise consumer prices, widen the digital divide, and deter the deployment of next-generation performance-sensitive services. The pro-regulation commenters say nothing to assuage those concerns.

Google first tries to avoid this issue altogether by asserting that QoS enhancements may be "unnecessary" because "there is no network problem allegedly solved by prioritization that cannot also be solved by additional bandwidth."[137] That is wrong. As discussed in our opening comments, industry analysts—ranging from Deloitte Touche Tohmatsu, to former Assistant Secretaries of Commerce Larry Irving and Bruce Mehlman, to William Norton of Equinix, and to Google's own head of TV technology—have concluded that the new generation of video-oriented applications and content "potentially dwarfs currently peered Internet traffic," causing "a serious supply side problem in the Internet today."[138] Although network engineers could theoretically build "dumb" pipes large enough to handle this incipient exaflood without packet prioritization, that approach would be enormously wasteful. Indeed, several studies have concluded that, if the government imposed a "dumb pipes" mandate by banning packet-prioritization techniques, broadband providers would need to raise each subscriber's monthly rates by more than $100 in order to ensure appropriate bandwidth for all applications.[139] The

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Comments 38-39), which contains such a ban (*see* S. 215, 110th Cong. § 12(a)(4)(C), (5) (2007)). Unless and until Google clarifies its position, we will assume that it still advocates the latter approach.

137 Google Comments 28.

138 William B. Norton, *Video Internet: The Next Wave of Massive Disruption to the U.S. Peering Ecosystem*, v1.3, at 1, 15 (Equinix 2007); *see* AT&T Comments 21-28 (discussing commentary on "exaflood" challenge).

139 AT&T Comments 33-34 (discussing studies). A study recently conducted by researchers at Rensselaer Polytechnic Institute, the University of Nevada-Reno, and AT&T Labs likewise confirms that a network confined to "best efforts" traffic would incur "substantial additional costs for the extra capacity required to operate networks in which all traffic is treated alike, and carrying traffic that needs to still be assured performance as specified in service level agreements

result would be a dramatic reduction in broadband subscribership, particularly in low-income areas, and a gross waste of network resources. That is why the National Association of State Utility Consumer Advocates acknowledges that "[e]ffective use of the Internet requires that time-sensitive packets receive priority over time-insensitive packets."[140] Neither Google nor any other commenter identifies any meaningful basis for doubting these conclusions.[141] And even if those conclusions were subject to debate, it would be exceedingly unwise for the government to straitjacket network engineers today on the basis of theoretical assumptions about the technological needs of the Internet over the long term.

In short, network engineers must build not only fatter pipes, but *smarter networks*, capable of efficiently differentiating between applications that do, and those that do not, need

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(SLAs)." RPI Press Release, "Undifferentiated Networks Would Require Significant Extra Capacity," June 29, 2007 (quoting coauthor and RPI professor Shivkumar Kalyanaraman); *see* Murat Yuksel, *et al.*, *Value of Supporting Class-of-Service in IP Backbones* (2007) (http://www.ecse.rpi.edu/Homepages/shivkuma/research/projects/cos-support.htm).

140 NASUCA Comments 9.

141 It is telling that Google, which operates an extensive network of its own, relies entirely on the example of Internet2 in arguing that escalating bandwidth demands should be handled by ever-fatter dumb pipes. *See* Google Comments 28-29. Internet2 is a non-profit research project that is funded through service fees, member dues, and grants, and its constituent members, including many of the nation's universities, are themselves the beneficiaries of public network-research funding. *See* http://www.internet2.edu/about/; http://www.internet2.edu/government/funding.html. Internet2 intentionally operates with substantial excess capacity (25-30% utilization) so that it can perform its principal function: research and experimentation with new networking technologies. *See* John Van, *On Internet2, innovating at higher speed*, Chicago Tribune, Dec. 6, 2006 (available at http://www.merit.edu/internet2/news/i2article.php?article=20061207_highspeed). By contrast, publicly traded commercial broadband providers, which do not typically receive government subsidies and must earn a competitive return on their investments to remain financially viable, cannot afford this approach and thus typically operate at significantly higher levels of utilization. *Id*. (estimating 75% capacity utilization by commercial broadband providers). If a commercial broadband provider were required to operate with as much excess capacity as Internet2, it would have no alternative but to raise end-user rates substantially.

performance enhancements in order to function properly.[142] Ultimately, even Google may not believe its own rhetoric about the value of network intelligence. Industry-analysis firm IDC recently concluded that Google and other "[n]et neutrality proponents will recognize that quality of service (QoS) is essential to the delivery of new services and quietly modify their position, ultimately participating in the network prioritization environment they now oppose."[143] And in its own comments, Google eventually acknowledges that "it is entirely reasonable for a broadband provider to . . . prioritiz[e] all packets of a certain application type, such as streaming video."[144]

The question, therefore, is how to ensure that, through these performance-enhancement techniques, broadband networks efficiently allocate scarce network resources in the manner that best satisfies the disparate and rapidly evolving needs of their customers. The only realistic solution to this resource-allocation problem is to be found *not* in the command-and-control agenda favored by the pro-regulation commenters, but in the free play of market forces, as applications and content providers decide how much—if anything—they wish to pay broadband networks for performance-enhancing services. As the FTC explains, this approach

> allow[s] providers to choose the priority level they are willing to buy for particular content or applications. This would create incentives for providers to determine accurately their data-transmission needs, and allow network operators to *allocate their resources more efficiently*. Providers that do not need peak performance or timing could pay less for less urgent prioritization or standard best-efforts delivery. Providers also could tailor their content and applications to account for these realities. . . . A Workshop participant has stated that "*pricing actually becomes a form of congestion control that has quantifiable advantages over more traditional technical approaches*."[145]

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142 AT&T Comments 28-36.

143 IDC Report, *supra*, at i.

144 Google Comments 22.

145 FTC Net Neutrality Report at 92 (emphasis added; quoting Jon Peha).

The no-commercial-agreements rule proposed by several commenters would explicitly foreclose this market-oriented means of matching scarce resources to ever-shifting consumer preferences. The result would be reduced efficiency, higher consumer prices, and broadband networks less capable of meeting the consumer demand for the next generation of performance-sensitive applications and content.

As a proposed substitute, the proponents of the no-commercial-agreements rule would permit broadband networks to "prioritiz[e] all packets of a certain application type," so long as "the same set of [prioritization] rules . . . appl[ies] to all packets within that category," and so long as broadband providers recovered all their costs from their own retail subscribers.[146] For several reasons, however, this is no solution at all.

First, by definition, the consumer-pays-all approach favored by many net neutrality advocates would require broadband networks to recover *from consumers alone* all of the costs of handling the most bandwidth-intensive applications, and would forbid broadband networks to recover anything from the providers that help cause these network costs to begin with.[147] There is no conceivable public policy rationale for artificially insulating providers like Google from such cost-recovery. Google and others argue that they already pay their "fair share" into the Internet ecosystem by creating valuable content, arranging for first-mile connectivity, and negotiating various Internet backbone arrangements.[148] In a free market, however, resource-allocation decisions are made not by government-administered "fairness" inquiries, but by the efficient interplay of market forces. In this context, the best way to allocate scarce network

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146 Google Comments 22, 40.

147 *See* AT&T Comments 74-79 (explaining why net neutrality regulation may be good for Google and similar companies but only at the expense of consumers).

148 *Id.* at 23-24 (formatting altered); *see also* NASUCA Comments 18.

resources to the performance-sensitive applications that need them most is to allow applications and content providers to purchase performance enhancements, whether from broadband networks or CDNs like Akamai. In all events, Google, with its dominant market position, is hardly positioned to complain about the "unfairness" of entering into negotiations with broadband networks about whether to help end users cover the costs that Google itself causes by handing off ever-increasing volumes of bandwidth-intensive applications to those networks.

Second, by artificially raising broadband rates, the consumer-pays-all approach would *exacerbate the digital divide*. In particular, it would reduce broadband subscribership on the margins, especially among consumers who would prefer to pay affordable rates simply for basic Internet connectivity and have no need for the QoS-needy, bandwidth-intensive applications used primarily by a minority of subscribers.[149] That effect would fall most heavily on low-income communities that have lagged furthest behind the rest of the nation in broadband adoption rates. As one NAACP spokesperson explains, net neutrality rules "would keep costs low for the large Internet content companies but shift the costs of network expansion mostly to consumers," and would thus have "disastrous" effects "for low-income and minority communities" by "pricing them out of the broadband market."[150] A senior official of the National Association for Equal Opportunity in Higher Education recently expressed a similar concern:

> [W]ell-meaning activists are now pushing for regulations on the Internet that would actually raise the price of broadband access, effectively pulling the high-speed plug on minority and low-income youth. They are pushing for "net neutrality" legislation, which would block broadband service providers from charging large Internet companies like Google for carrying things like high-quality video into users' homes. . . . This is about money. *If [the net neutrality activists] win, the losers will be minority and low-income youth. . . . If companies*

149 *See* AT&T Comments 74-79.

150 Greg Moore, *Extend Internet's Full Reach to Black Communities*, Asbury Park Press, May 11, 2007 (http://www.app.com/apps/pbcs.dll/article?AID=/20070511/OPINION/705110384/1030).

> *like Google that have benefited the most from the Internet's riches were to pay their fair share, it could open up a wealth of opportunity for minority and low-income communities, putting the world and all its knowledge at their fingertips*.[151]

A variety of commenters echo this same concern.[152]

Third, simply on an engineering level, a ban on business-to-business QoS agreements would make it much more difficult to allocate scarce network resources to the uses most valued by consumers. As noted, advocates of that ban would generally permit a broadband network to "prioritiz[e] all packets of a certain application type, such as streaming video," so long as "the same set of [prioritization] rules . . . appl[ies] to all packets within that category."[153] This approach would be nearly impossible to implement.

For two basic reasons, a broadband network could not simply post a set of protocols for all providers to use in identifying packets corresponding to different "application types." First,

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[151] Art Thomas, *"Net neutrality" a bad deal: Dominant users should pay more so more non-users can afford Internet*, Charlotte Observer, July 12, 2007 (http://www.charlotte.com/409/story/193901.html) (emphasis added).

[152] LULAC Comments 1 ("While large numbers of Latinos have enjoyed increased economic, educational, and political opportunity with the click of a mouse, for a variety of reasons, others have not yet experienced the benefits of the Internet. . . . [W]e urge policymakers to cast a skeptical eye on proposed net regulations that could reduce the incentive to invest and, thereby, limit innovation and deployment to underserved communities."); Labor Council for Latin American Advancement Comments 1 ("[M]any of today's broadband providers are investing capital to increase broadband deployment . . . . Additional regulation of these providers, as advocated by supporters of 'net neutrality,' would actually inhibit their efforts, and thus slow the progress we so desperately would like to witness on behalf of our members and the Latino community. Net neutrality laws will take away the incentives these providers have to invest, and will leave Latinos specifically, and Americans overall with less access[.]"); Hispanic Technology & Telecommunications Partnership Comments 2 ("[N]o compelling reason currently exists to establish new regulations in addition to the FCC's existing policy statement . . . . [We] encourage the Commission to seek policies that promote investment, development of new technologies, and the expansion of broadband services. If this happens we will be well on our way to eliminating the digital divide for Hispanics and all underserved Americans."); *see also Hermalin and Katz, supra*, at 2 ("consumers at the bottom of the market—the ones that single-product restrictions typically are intended to aid—are almost always harmed by the restriction" on differentiation among product lines).

[153] Google Comments 22, 40; *see also, e.g.*, NASUCA Comments 13, 29.

no one would agree on how to define each such "type" of application, particularly given the rapid proliferation of new applications that defy easy categorization. For example, if regulators permitted broadband networks to prioritize all "video" packets, there would be no consensus on "whether, and how, such prioritization would apply to different types of 'video' applications, e.g., Flash video, animated PowerPoint, or video e-mail."[154]

Second, even if the thousands of interested parties could somehow agree *in principle* about which specific applications fall into which "application types," it would be nearly impossible *in practice* for a broadband provider to police a non-monetized system that aims to treat all applications of a defined "type" the same. Packet headers today do not typically contain reliable information that permits a broadband network to identify the nature of the packets' "payloads." With currently deployed technology, therefore, a broadband network would generally have to rely on each provider's representations, contained in packet headers, about the nature of those payloads. But if providers could receive any priority level for free, they would have enormous incentives to mischaracterize the payloads contained within their packets in order to qualify for the highest possible priority level. As the suspicion of such packet-mischaracterization leads more and more providers to do the same thing, priority levels would become meaningless, most traffic would be assigned to the same high level, and truly QoS-needy packets would not receive the performance enhancements they need in order to function properly. And it would be exceedingly difficult to prevent this scenario through enforcement measures. Indeed, the Commission has not yet even found an effective way to police similar arbitrage on the *conventional telephone network*, where the failure of providers to give accurate

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[154] NCTA Comments 18.

information about their traffic has inflicted massive litigation and other transaction costs on the industry.[155] The Commission should take pains to avoid creating a similar quagmire here.

In the final analysis, providers will accurately calibrate their QoS requests to match the technical needs of—and the consumer demand for—their applications and content only if they must *internalize the costs* of their claims for priority on congested broadband networks. Market-based QoS agreements are an essential means to that end, because they set appropriate price signals for the allocation of scarce network resources. Through such agreements, "pricing . . . becomes a form of congestion control" uniquely suited to track consumer preferences amid rapid changes in the Internet ecosystem.[156] The government can prohibit such agreements only at the cost of making Internet access less efficient for providers, more expensive for consumers, and less conducive to the deployment of performance-sensitive applications and content. That would be a profound mistake. Business-to-business agreements, governed by market forces, are the best hope for achieving what should be the Commission's two overriding objectives at this stage of the Internet's development: (i) rapid deployment of the next generation of innovative IP services and (ii) continued affordable end user rates for basic broadband Internet access.

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[155] *See, e.g.*, Reply Comments of the Supporters of the Missoula Plan, CC Dkt. 01-92, Jan. 5, 2007, at 8-10 (addressing scope of "phantom traffic" problem); Stephen Labaton, *MCI Faces Federal Fraud Inquiry on Fees for Long Distance Calls*, N.Y. Times, July 27, 2003, at A1 (reporting that carrier may have "defrauded other telephone companies of at least hundreds of millions of dollars over nearly a decade" by "disguising long distance calls as local calls").

[156] FTC Net Neutrality Report, *supra*, at 92 (internal quotation marks omitted). As discussed in our opening comments, applications *providers*, not individual end users, are best positioned to negotiate efficient QoS arrangements with broadband networks for use with particular applications. *See* AT&T Comments 77-78. Forcing broadband networks to negotiate applications-specific QoS details with end users instead of providers would, at best, dramatically raise transaction costs and, at worst, preclude efficient QoS arrangements altogether. *Id.*

C. Common-Carrier Regulation Has No Place on the Internet.

Several proponents of net neutrality regulation acknowledge that there is nothing inherently problematic about a broadband provider's sale of performance-enhancing services to applications and content providers, and that such arrangements may well serve the ultimate interests of consumers.[157] But they would nonetheless subject broadband providers to common carrier obligations when they enter into such arrangements. For example, BT Americas would permit broadband networks to "engage in packet discrimination" and "charge for . . . QoS services," but would require them to publicize their commercial agreements and forbid them to "unjustly and unreasonably discriminate amongst [wholesale] customers" in "the rates, terms and conditions of service."[158] This approach would essentially subject broadband providers to a form of the monopoly-era Title II-type common carriage regulation that was imposed on the legacy telephone network more than seventy years ago.

For reasons set forth in our opening comments, this common carriage proposal is untenable on both legal and policy grounds.[159] First, in the *Wireline Broadband Order*, the Commission *abolished* common carrier regulation in the broadband context precisely because it

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[157] *See, e.g.*, BT Americas Comments 14-15; CDT Comments 10. CDT indicates that it may have no objection to deals in which broadband providers "prioritiz[e] packets from application or service providers who have paid for special treatment, where the ISP offers such treatment to **anyone willing to pay**," but that it "would be very concerned . . . if purchasing priority from ISPs were to become necessary, as a practical matter, to obtain reasonable quality delivery of traffic." CDT Comments 10 (emphasis in original). This caveat merely echoes the "winding dirt road" concern, which lacks any foundation for the reasons noted in Section I.B above.

[158] BT Americas Comments 16; *cf.* CDT Comments 14 (proposing "nondiscrimination principle" under which government would prohibit "unreasonable discrimination . . . with respect to speed, service quality, or price").

[159] Significantly, even some pro-regulation commenters have concluded that the Commission may itself lack jurisdiction to impose net neutrality rules, that "the task of developing an appropriate overall policy framework lies with Congress," and that "[i]n the absence of . . . legislation, the Commission's authority over the broadband Internet is open to question." CDT Comments 12.

found that such regulation does far more harm than good, given the dynamic and competitive nature of the broadband industry. The Commission has no legal or empirical basis for revisiting those findings now.[160] Indeed, to implement net neutrality proposals, the Commission would need to reject half a dozen years of its own judicially-validated precedent in this area.[161] The pro-regulation parties do not contend otherwise; instead, they call on the Commission to make a 180-degree "course correction,"[162] despite the severe litigation risks it would thereby incur.

Second, even if the Commission were addressing the issue for the first time, any fair reading of the facts would still lead it to conclude that common carriage regulation would harm the Internet. The Internet has thrived precisely because the absence of government intervention has encouraged a climate of free-wheeling experimentation with new services and one-off business alliances.[163] Common carrier rules would deter such experimentation by exacerbating its downside risks: Each provider would have reason to fear that, whenever an experimental service or business relationship turns out to be unprofitable, common carrier rules may nonetheless require the carrier to keep offering the same unprofitable service to additional customers or enter into similar unpromising business relationships with additional partners.[164] This "in for a penny, in for pound" principle of common carriage is thus inimical to the creative customization integral to the Internet's success.

Finally, common carrier rules in this context would cause unprecedented litigation costs and regulatory uncertainty. "Net neutrality regulation, even if justified, will inevitably lead to

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160 *See* Section II.A, *supra*; *see* AT&T Comments 56-58, 81.

161 AT&T Comments 47-50, 56-58.

162 Google Comments 9.

163 AT&T Comments 83.

164 *See id.*

some difficult line-drawing. . . . Anti-discrimination rules can be hard to write, and hard to enforce."[165] As a result, such rules would spawn a new, highly destabilizing round of regulatory litigation that could dwarf post-1996 Act litigation in scope and intensity.[166] Even in the most settled industry environments, a ban on "unreasonable discrimination" is inherently indeterminate. Like "neutrality," "discrimination" is not a self-defining concept, and there is often room for disagreement about (for example) whether two services are "like" or whether the complainant is "similarly situated" to the customer whose existing business deal it wants the defendant to replicate for the complainant's benefit.[167] And in part because price discrimination is welfare-maximizing in many contexts, the case law abounds with disputes about whether specific instances of discrimination are justified as "reasonable."[168] Finally, although the indeterminacy of common carrier rules makes for regulatory uncertainty in any industry, the problem would be particularly intense in the Internet environment, where the rapid evolution of services and business models would defy the efforts of any regulatory body to keep up.

The proponents of common-carrier regulation make no serious effort to address any of these concerns. Instead, they are content to announce their general sense that "unreasonable discrimination" would be bad, and they invite the Commission to figure out how to implement

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165 Edward Felten, *Nuts and Bolts of Network Neutrality*, at 5-6 (July 6, 2006) (http://itpolicy.princeton.edu/pub/neutrality.pdf) (formatting altered); *see also id.* at 5 (suggesting that regulators would find it difficult to "distinguish [an anticompetitive] stratagem from the case of fair and justified engineering decisions that happen to cause a little temporary jitter"); *Keep it simple,* The Economist, at 57, Mar. 11, 2006 ("Ensuring 'neutrality' could require regulators to interpose themselves in all kinds of agreements between network operators, content providers and consumers. If a network link is too slow to support a particular service, does that constitute a breach of neutrality?").

166 *See, e.g.*, Internet Freedom Coalition Comments 7-9.

167 *See generally MCI Telecomm'ns Corp. v. FCC*, 917 F.2d 30, 37-46 (D.C. Cir. 1990) (discussing Section 202 case law).

168 *See generally id.*; *Orloff v. FCC*, 352 F.3d 415 (D.C. Cir. 2003); *see also* AT&T Comments 79 n.213.

that intuition in the myriad of contexts in which it might arise. The Commission should decline that inauspicious invitation and follow the conclusions drawn by Congress and from the Commission's own forty-year history of unregulation: the Internet serves consumers best when the government leaves it alone.[169]

IV. "NONDISCRIMINATION" REGULATION WOULD NECESSARILY EXTEND NOT JUST TO BROADBAND PROVIDERS, BUT TO OTHER PROVIDERS OF INTERNET APPLICATIONS, CONTENT, AND SERVICES.

The Internet ecosystem features a number of companies that have exceptionally large shares of their respective markets. For example:

- Microsoft dominates the markets for Web browsers (with a share of nearly 80%) and desktop operating systems (with a share of about 90%);[170]
- Intel has an 80.5% share of the microchip market;[171]
- YouTube (owned by Google) has a 60.2% share of the U.S. on-line video market,"[172] and by itself now accounts for almost *10% of all traffic on the Internet*;[173] and
- Google accounted for nearly 65% of Internet searches in April 2007,[174] and its market share is *growing*.[175]

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169 *See* Jason Oxman, *The FCC and the Unregulation of the Internet*, OPP Working Paper No. 31, Office of Plans and Policy, FCC (July 1999).

170 *See* Top Operating System Market Share Trend, July, 2006 to June 2007 (http://marketshare.hitslink.com/report.aspx?qprid=5; Browser Market Share for June, 2007 (http://marketshare.hitslink.com/report.aspx?qprid=0).

171 Tom Krazit, *Intel's market share rises on AMD's problems*, CNET News.com, Apr. 24, 2007 (http://news.com.com/2100-1006_3-6178921.html).

172 *YouTube's hits top rivals' combined*, CNN Money.com, June 27, 2007 (http://money.cnn.com/2007/06/27/technology/bc.youtube.surge.reut/index.htm).

173 *See* Ellacoya Networks Press Release, June 18, 2006 (http://www.ellacoya.com/news/pdf/2007/NXTcommEllacoyamediaalert.pdf).

174 Hitwise US—Leading Search Engines (Apr. 2007) (http://www.hitwise.com/datacenter/searchengineanalysis.php).

175 Eric Bangeman, *Microsoft, others suffer as Google's web search share grows*, Ars Technica (Feb. 28, 2007) (http://arstechnica.com/news.ars/post/20070228-8946.html).

Each of these companies commands its respective markets and is integral to the evolution of the Internet. But no federal authority subjects these companies to prescriptive economic regulation of any kind; at most, Microsoft is subject to narrowly tailored consent decrees based on *demonstrated antitrust violations*. No federal regulator tells Microsoft how to write its code to accommodate users who would like to run non-Microsoft applications (such as WordPerfect or Mozilla Firefox) on top of the dominant Microsoft Windows operating system. No federal regulator supervises Intel's dealings with complementary hardware manufacturers. And no federal regulator asks Google to publicize its search algorithms to ensure "nondiscriminatory" treatment for all websites and advertisers.

Despite all this, net neutrality advocates urge the government to adopt prescriptive economic regulation to govern broadband Internet access, even though no broadband provider has committed any antitrust violation and no provider accounts for more than 22% of the broadband subscribers nationwide.[176] Viewed from the perspective of the Internet ecosystem as a whole, that proposal is absurdly myopic.

For example, with its dominance of the search market, Google—far more than any broadband provider—affects where end users spend their time on the Internet, which websites will succeed or fail, and which viewpoints will influence public debate and which will not. And there is already some evidence that Google has exploited that market dominance to shape its users' Internet experiences in strikingly non-"neutral" ways. In its service agreement, Google "reserves the right . . . to pre-screen, review, flag, filter, modify, refuse or remove any or all

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176 *See* Verizon Comments 51-52.

Content" found on the Internet as Google sees fit.[177] And, according to press accounts, Google has acknowledged that it has discriminated in favor of political messages that it supports:

> Google's top Washington lobbyist disclosed [in 2006] that the company had configured its search engine to return paid links that support Google's position on net neutrality after the entry of certain key words. "This week we've been running a large set of which I would call public service announcement-type advertisements. So if you type in net neutrality at Google, you'll see advertisements for the Its Our Net coalition or other sites we may be pointing to," Google policy counsel Alan Davidson said[.][178]

In short, if the Commission were to conclude that an interventionist regulatory regime is needed to preserve the "neutrality" of the Internet, it could not defensibly apply that regime to broadband providers but *not* to Google (or any other provider of Internet-based services).

In its comments, Google appears oddly unaware that the heavy-handed Internet regulation it invites for others would naturally extend to Google itself. Indeed, with no apparent sense of the relevance of such regulation to its own operations, Google even urges the Commission to adopt "a more broad-based, fulsome 'multimodal' approach, which seeks to

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[177] Google Terms of Service, § 8.3 (http://www.google.com/accounts/TOS?loc=US).

[178] *Google Web Search: Do No Evil?*, Multichannel Newsday, June 12, 2006. Questioned further about this practice, Google unapologetically explained that it "participated in its own auction for the keywords 'net neutrality' and that if opponents of the concept wanted their ads to appear higher in sponsored Internet search results, they could have decided to pay more." Sarah Lai Stirland, *Google E-Mail Highlights Division Over Net Neutrality*, Technology Daily PM, June 13, 2006 (citing Google spokesman Jon Murchinson). Again, Google appears oblivious to the relevance of its net neutrality advocacy to its own conduct. In this proceeding, Google repeatedly professes concern that vertically integrated firms will misuse their position in a platform market to disadvantage unaffiliated providers of Internet applications or content. Yet Google *avowedly* exploits the dominance of its search engine to give its preferred content greater visibility than its competitors' content, and Google never explains what it means when it claims to have "participated in its own auction" (*id.*); all we know is that it unilaterally moved its favored political messages to the head of the queue, apparently at no cost to itself. Among other things, "neutrality" or "nondiscrimination" regulation would require Google to publicize and justify its search algorithms, the details of its keyword auctions, and the precise manner in which it "participate[s] in its own auction[s]."

promote competitive forces at *different layers* of the network."[179] But one need look no further than the comments of the self-styled "consumer advocates" to see that Google and other dominant companies at the Internet's content and applications layers are equally deserving of "nondiscrimination" obligations of their own if and when such obligations are adopted for any sector of the Internet marketplace.[180] Moreover, as discussed in our opening comments, the government would also need to begin regulating CDNs, P2P providers, and any other Internet-based company that exerts structural influence on whether the Internet will treat applications and content "neutrally."[181]

Nor would Google have any justifiable economic basis for distinguishing itself from broadband providers for these purposes.[182] As noted, the Internet search market is far more

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179 Google Comments 35 (emphasis added).

180 *See, e.g.*, CFA Comments 9 ("The role of regulation should be to ensure that *strategically placed actors with market power* cannot undermine innovation *at any layer* of the platform.") (emphasis added); *id.* at 29 (urging Commission to "declare that *discrimination of any kind . . .* undermines competition among network providers, applications and service providers, and content providers") (emphasis added; quotation marks omitted); Jeff Chester, *Is The Open Internet Coalition About A Real Democratic Net—or One Safe for Data Collection and Interactive Advertising?*, Digital Destiny, May 25, 2007 (http://www.democraticmedia.org/jcblog/?p=287) ("We are uneasy about the alliance between public interest groups and Open Internet Coalition members such as Google and Interactive Corp. (Ask.com). . . . [W]ithout rules governing Google's expansion, limits on data collection, a strong legal framework for privacy, and policies promoting meaningful open non-commercial civic space, the Internet will be 'open' in name only. The Google's, Yahoo!'s, IAC's, Microsoft's, etc. will be working with the phone and cable broadband monopolists on a playing field which still unfairly favors the giants."); *cf.* Competitive Enterprise Institute Comments 4 ("Google faces similar market power and information-gatekeeper accusations, even as a content company. . . . Any regime that a successful net neutrality campaign establishes would make the entire communications sector more vulnerable to future political predation . . . . One consulting firm approvingly notes that the NOI 'has the potential to broaden the scope of the debate substantially and to put some of the parties who have been pushing net neutrality on the defense.'").

181 AT&T Comments 85-92.

182 Scott Cleland, *Dismantling Google's reasons why NN should not apply to them*, Precursor Blog, May 16, 2007 (http://www.precursorblog.com/node/398) (citing Google

concentrated (in Google's favor) than is the market for broadband Internet access. And Google's dominance of that market is highly entrenched, because it owns a capital-intensive data network of unsurpassed scope and processing power. Specifically, Google owns "a staggering collection of hardware, whose constituent servers number 450,000, according to the lowest estimate,"[183] combined with a fiber-optic transmission network "so massive that several service provider specialists believe it could end up with one of the world's largest core transport networks, effectively building its own private Internet" and "controlling distribution of much of the world's Internet traffic."[184] "By building its own infrastructure rather than relying on commercial data centers, [Google CEO Eric] Schmidt told analysts in May, Google gets 'tremendous competitive advantage.'"[185] That "tremendous competitive advantage" helps explain why, "the bigger Google gets, the harder it will be for the competition to close the gap";[186] why a growing number of independent analysts have concluded that Google's business is "a natural monopoly";[187] and

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spokesperson's erroneous suggestion that search market is less concentrated than broadband market).

183 George Gilder, *The Information Factories*, Wired, Oct. 2006 (http://www.wired.com/wired/archive/14.10/cloudware_pr.html).

184 R. Scott Raynovich, *Google's Own Private Internet*, Light Reading, Sept. 20, 2005 (http://www.lightreading.com/document.asp?doc_id=80968).

185 Gilder, *The Information Factories*, *supra.*

186 Bangeman, *Microsoft, others suffer as Google's web search share grows*, *supra*.

187 Bloomberg News, *Web search engine will take 90% of market, analysts say*, Chicago Tribune, July 12, 2007 (http://www.chicagotribune.com/business/chi-thu_brief1_0712jul12,0,3353883.story?coll=chi-business-hed) ("Google Inc., owner of the world's most popular Internet search engine, will take 90 percent of the market over the next decade through increased spending on research and development, analysts at Cowen & Co. said . . . . 'We believe Internet search is a natural monopoly[.]'"); James B. Stewart, *Google Is Best-Positioned to Dominate Online Ads*, SmartMoney.com (May 22, 2007) (http://www.smartmoney.com/commonsense/index.cfm?story=20070522&hpadref=1) ("[S]urely the jury is now in on the fundamental question about Google's search business: It is a natural monopoly."); *see also* Rob Hof, *Is Google Too Powerful? As the Web giant tears through media, software, and telecom, rivals fear its growing influence*, BusinessWeek, Apr. 9, 2007 (http://www.businessweek.com/magazine/

why some net neutrality advocates argue that a government-run scheme of "search neutrality" is now necessary to keep Google "from corrupting search results for its own benefit."[188]

Moreover, even if the search market that Google dominates were more competitive than it is, Google's own logic would *still* require the imposition of "neutrality" regulations on that market, because Google and its pro-regulation allies claim that competition does not remove the need for "neutrality" regulation. In fact, Google insists that incentives to discriminate become *stronger* as a market "moves from monopoly to competition."[189] If that were true, Google and other major Internet-based firms would be no less subject to the same logic—and would thus be subject to prescriptive non-discrimination rules to preempt their own deviations from principles of "openness" and "neutrality." For example, if broadband providers were required to publicize the proprietary details of their contracts with other service providers to ensure that any performance-enhancing services are provided in a nondiscriminatory fashion, Google would similarly need to publicize the details of its search and advertising algorithms. This would ensure, for example, that Google does not repeat its gratuitous elevation of pro-net-neutrality advertisements over pro-free-market advertisements as part of another "public service announcement-type" campaign.[190] Indeed, if such nondiscrimination requirements were merely

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content/07_15/b4029001.htm) (arguing that "the vast commercial landscape of the Net, like so many other tech markets in the past," may "condense to one dominant force for the foreseeable future"—namely, Google).

188 John C. Dvorak, *A Threat to Web Search*, PCMag.com (Jan. 1, 2007) (http://www.pcmag.com/print_article2/0,1217,a=198269,00.asp); *see also* Timothy Wu, *Why Have a Telecommunications Law? Anti-Discrimination Norms in Communications*, 5 J. Telecomm. & High Tech. L. 15, 46 (2006) (suggesting potential need for preemptive government intervention to "block discrimination by powerful applications providers").

189 Google Comments 17; *see also* Open Internet Coalition Comments 8-9.

190 *See* p. 55, *supra.*

the equivalent of a "sprinkler system," as Google's trade association contends,[191] then Google should have no serious concern about the application of these purportedly unobjectionable precautions to its own behavior.

AT&T nonetheless repeats what it made clear in its opening comments: it opposes prescriptive economic regulation of *any* participant in the Internet's phenomenally diverse and robust ecosystem. The Internet became the most successful engine of consumer value-creation ever made *not* because the Commission told information service providers what they could not do, but because it has allowed the "free market . . . , unfettered by Federal or State regulation,"[192] to serve consumers in numberless and increasingly innovative ways with every passing minute. That is the worthiest legacy in the Commission's history, and its abandonment now would be a mistake of similarly historic proportions.

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191 Open Internet Coalition Comments 11 n.20.

192 47 U.S.C. § 230(b)(2) (emphasis added); *see also* Pub. L. 104-104, Title VII, § 706, 110 Stat. 153 (47 U.S.C. § 157 note) (instructing FCC to follow a policy of "regulatory forbearance" where needed to "remove barriers to infrastructure investment").

CONCLUSION

The Commission should reject proposals for "net neutrality" obligations and keep the Internet unregulated.

Respectfully submitted,

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