

the potential for such fees may deter outsiders from investing in long-term research and development that could benefit all of society.¹⁴⁷

64. Some parties characterize the Internet as a “general purpose technology,” which “does not create value through its existence alone” but “by enabling users to do the things they want or need to do.”¹⁴⁸ “[T]he rate at which a general purpose technology affects economic growth depends on the rate of co-invention (*i.e.*, the rate at which potential uses of the technology are identified and realized).”¹⁴⁹ In the case of the Internet, this means “that identifying potential uses for the Internet and developing the corresponding applications is the prerequisite for realizing the enormous growth potential inherent in the Internet as a general-purpose technology. As a result, measures that reduce the amount of application-level innovation have the potential to significantly harm social welfare by significantly limiting economic growth.”¹⁵⁰

65. Parties opposing further Commission action in this area raise several arguments in response. First, they contend that differentiation in pricing or quality of service may enable different types of innovation that might not be feasible with a network lacking such capabilities.¹⁵¹ Second, they assert that some traffic imposes greater burdens on the network than other traffic and that “innovation could be even better for consumers if it could respond to price signals from platform providers,” such as by “tak[ing] into account potential congestion costs of bandwidth-intensive applications.”¹⁵² Third, they often claim that charging content, application, and service providers may be necessary to recover the cost of the investment in their networks and to fund additional investment in research, development, and

¹⁴⁷ See, e.g., Siebert June 15, 2007 Comments, WC Docket No. 07-52 (“The internet is a great source of academic research (see the [folding@home](#) project). Without network neutrality, academic research and development on the internet would become . . . dismal . . .”); Atyas June 15, 2007 Comments, WC Docket No. 07-52 (discussing how prioritization of packets could disrupt research and development efforts of his company). One example of such research is the [Folding@home](#) Project that relies on distributed computing across the Internet to study protein folding. See [Folding@home—Main Page](#), <http://folding.stanford.edu/> (last visited Oct. 21, 2009).

¹⁴⁸ See, e.g., Testimony of Barbara van Schewick at the Federal Communications Commission’s Second Public En Banc Hearing on Broadband Network Management Practices at Stanford University, Stanford, CA, at 5, 7–8 (Apr. 17, 2008); van Schewick, *Towards an Economic Framework*, 5 J. ON TELECOMM. AND HIGH TECH. L. at 385–86.

¹⁴⁹ van Schewick, *Towards an Economic Framework*, 5 J. ON TELECOMM. AND HIGH TECH. L. at 385–86.

¹⁵⁰ *Id.*; see also *Applications for Consent to the Transfer of Control of Licenses From Comcast Corporation and AT&T Corp. to AT&T Comcast Corporation*, MB Docket 02-70, Petition To Deny of Verizon Telephone Companies and Verizon Internet Solutions D/B/A Verizon.net, App. B at 15 (Apr. 29, 2002) (Declaration of Robert W. Crandall: “Non-affiliated content providers are less likely to be willing to invest in broadband Internet content as long as vertically integrated cable modem providers can deny access to their broadband conduit and there is no major competitive alternative to this conduit.”).

¹⁵¹ See, e.g., Christopher S. Yoo, *Network Neutrality, Consumers, and Innovation*, 2008 U. CHI. LEGAL F. 179, 227–38 (2008) (arguing that “[d]eviations from network neutrality can in fact enhance innovation,” and that “[c]onversely, preventing such deviations can forestall many new applications from emerging”); Testimony of George S. Ford, Ph.D., Chief Economist, Phoenix Center for Advanced Legal & Economic Public Policy Studies, Before the Federal Communications Commission Open Meeting on Network Neutrality and Broadband Network Management, Stanford University, at 18–19 (Apr. 17, 2008) (discussing a study finding “that network neutrality regulation would reduce, not increase, network investment,” and finding “that offering premium services to content firms stimulates innovation at the network edge and is beneficial to content firms, and more beneficial to smaller content providers than larger ones”).

¹⁵² Robert Hahn and Scott Wallsten, *The Economics of Net Neutrality*, AEI-Brookings Joint Center for Regulatory Affairs, June 2006 at 3; see also Peha, *Quest for a Balanced Policy*, 1 INT’L J. OF COMM. at 652 (“[T]he cost per bit of carrying traffic that arrives sporadically in large bursts is greater than the cost of carrying traffic that arrives in a steady stream.”).

infrastructure. According to opponents, charging only end users instead would increase end-user prices, limit the number of users, and reduce revenue, discouraging network improvements.¹⁵³

66. Opponents also cite economic theory that holds that benefits can arise from price and quality discrimination, at least in certain cases. For example, they argue that the ability of a provider to price discriminate not only will benefit the provider, but may also benefit the public as a whole (although not necessarily in all cases).¹⁵⁴ Further, economists have recognized that the Internet is an example of a “two-sided market,” in that broadband Internet access service providers offer service to both end-user customers and to content, application, and service providers simultaneously.¹⁵⁵ Theoretical economic analyses suggest that price discrimination may be more beneficial in a two-sided market than in the standard one-sided market.¹⁵⁶

b. Competition and Market Forces

67. Supporters of open Internet policies contend that market forces alone are unlikely to ensure that broadband Internet access service providers will discriminate in socially efficient ways and that, absent regulation, such discrimination is likely to change fundamentally the nature of the Internet, reduce competition, and hinder innovation and growth. Furthermore, some have noted that the justification for government oversight of key infrastructure has not always relied solely on lack of

¹⁵³ See, e.g., C. Scott Hemphill, *Network Neutrality and the False Promise of Zero-Price Regulation*, 25 YALE J. ON REG. 135, 173 (2008) (Hemphill, *False Promise*) (“Where, as with broadband service, an access charge for content providers is not likely to be entirely passed on by content providers to the customer, a zero-price rule can have an inhibitory effect upon adoption.”); AT&T June 8, 2009 Comments, GN Docket No. 09-51, at 111 (Prohibiting providers from recovering a portion of their costs from both end users and content, application, and service providers “would have the perverse effect of subjecting consumers to higher broadband rates than they might otherwise pay—an outcome hardly consistent with efforts to promote broadband adoption.”); see also Robin S. Lee & Tim Wu, *Subsidizing Creativity through Network Design: Zero-Pricing and Net Neutrality*, 23 J. OF ECON. PERSPECTIVES 23, 61, 67 (2009) (Lee & Wu, *Subsidizing Creativity*) (“Of course, for a given price level, subsidizing content comes at the expense of *not* subsidizing users, and subsidizing users could also lead to greater consumer adoption of broadband.”).

¹⁵⁴ Specifically, economists have long recognized that the ability to price discriminate will increase producer surplus and may, under some conditions, also increase total surplus (*i.e.*, the sum of producer and consumer surplus). Whether total surplus increases depends on whether price discrimination increases the level of the firm’s output. In particular, by raising the price charged to inelastic customers, price discrimination will reduce the firm’s output to this segment of the market. On the other hand, by lowering the price to more elastic customers, price discrimination will increase the firm’s output to that segment of the market. Because output may either rise or fall under price discrimination, the effect of price discrimination on total surplus may be positive or negative. See Preston McAfee, *Price Discrimination*, 1 ISSUES IN COMPETITION LAW AND POLICY 480 (2008). Price discrimination can enhance social benefits when it increases the value that users place on the operator’s network. This occurs, for example, when price discrimination enables the network operator to offer a set of service qualities that better match the needs of content providers and end users.

¹⁵⁵ Moreover, economists note that the benefit that one side of the market obtains from access to the other side of the market is directly related to the number of parties that are reachable on the other side of the market. Theoretical economic analyses have shown that the welfare effects of pricing in two-sided markets are complicated by such an externality. For example, the benefit that end users receive from subscribing to a broadband Internet access service may depend importantly on the number of content providers to which the subscriber has access. Under such conditions, efficiency may dictate charging content providers a price that is below the cost of providing service to them. See, e.g., Jean Charles Rochet & Jean Tirole, *Platform Competition in Two-sided Markets*, 1 J. OF THE EUROPEAN ECON. ASS’N 990 (2003); Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. OF ECON. 668 (2006).

¹⁵⁶ See E. Glen Weyl, *The Price Theory of Two-Sided Markets*, Unpublished Manuscript, Harvard University (2008), http://www.people.fas.harvard.edu/~weyl/pt2sms_7_08.pdf.

competition in the relevant market, and argue that the long-standing doctrines of common carriage or bailment should inform policies for broadband Internet access service providers.¹⁵⁷

68. Even where there is effective competition in the Internet access market, individual broadband Internet access service providers may charge inefficiently high prices to content, application, and service providers, even though it may be in the collective interest of all providers to charge a lower price or zero price in order to maximize innovation at the edge of the network and thereby increase the overall value of broadband Internet access. Investing in innovative Internet content, applications, and services is risky, and firms will not invest unless their expected revenues exceed their expected costs. If allowed to do so, broadband Internet access service providers may attempt to extract some of the profit earned by content, application, and service providers by charging them fees for providing access (or prioritized access) to the broadband Internet access service providers' subscribers. These fees will reduce the potential profit that a content, application, or service provider can expect to earn and hence reduce the provider's incentive to make future investments in the quantity or quality of its content, application, or service.

69. If enough broadband Internet access service providers impose a fee, or if the fees are sufficiently high across a small number of broadband Internet access service providers with sufficient market share, then not only will content, application, and service providers' incentive to innovate be reduced, but the fees could drive some content, application, and service providers from the market. This would reduce the quantity and quality of Internet content, applications, and services, reducing the overall value of the Internet to end users and thereby reducing demand for broadband Internet access services.¹⁵⁸ This dynamic raises a collective action problem: Although it might be in the collective interest of competing broadband Internet access service providers to refrain from charging access or prioritization fees to content, application, and service providers, it is in the interest of each individual access provider to charge a fee, and given multiple providers, it is unlikely that access providers could tacitly agree *not* to charge such fees.¹⁵⁹ Furthermore, it is unlikely that competitive forces are sufficient to eliminate the incentive to charge a fee, particularly where the imposition of such a fee will not cause the access

¹⁵⁷ Providers of key infrastructure and services, such as innkeepers, freight carriers, and railroads, have traditionally had an obligation to serve all customers upon reasonable request, on a nondiscriminatory basis, and with "an adequate amount of care." See Susan P. Crawford, *Transporting Communications*, 89 B.U. L. REV. 871, 883 (2009) (Crawford, *Transporting Communications*); BARBARA A. CHERRY, *THE CRISIS IN TELECOMMUNICATIONS CARRIER LIABILITY: HISTORICAL REGULATORY FLAWS AND RECOMMENDED REFORM* 9–10, 13–15 (1999). These entities were "affected with the public interest"—they performed quasi-public functions by providing crucial inputs to many other sectors of the economy and society and thus were seen as critical to the well-being of the nation. See Crawford, *Transporting Communications*, 89 B.U. L. REV. at 883. In these cases, common carrier regulation was therefore justified in order to maximize positive spillovers from use of the network. See, e.g., Tim Wu, *Why Have a Telecommunications Law? Anti-Discrimination Norms in Communications*, 5 J. ON TELECOMM. & HIGH TECH. L. 15, 25 (2006). Support for the oversight of broadband Internet access service providers has also been found in the doctrine of bailment, under which an entity that holds itself out as offering service to the public is considered implicitly to undertake obligations to exercise due care when handling the bailor's property, with the bailor here being either the end user or a content, application, or service provider. See Crawford, *Transporting Communications*, 89 B.U. L. REV. at 878; William F. Elliot, *A Treatise on the Law of Bailments and Carriers*, UCLA School of Law Archive §§ 1, 152 (1914), available at http://www.archive.org/stream/treatiseonlawofb00elli/treatiseonlawofb00elli_djvu.txt.

¹⁵⁸ See generally Lee & Wu, *Subsidizing Creativity*, 23 J. OF ECON. PERSPECTIVES 61.

¹⁵⁹ This type of situation is typically called a public goods or collective action problem. In such a situation, economic theory suggests that individual firms have a dominant strategy (e.g., they will choose to extract a high payment regardless of the decisions made by other Internet access service providers) to "free-ride" off the willingness of some firms to refrain from charging a high fee. See John Ledyard, *Public Goods: A Survey of Experimental Research*, in *HANDBOOK OF EXPERIMENTAL ECONOMICS* (Kagel & Roth eds., 1995).

provider to lose many customers.¹⁶⁰ Thus, allowing broadband Internet access service providers to impose access or prioritization fees may inefficiently reduce innovation and investment in content, applications, and services, generating a suboptimal economic outcome.

70. Where effective competition is lacking (*i.e.*, where broadband Internet access service providers have market power),¹⁶¹ it is more likely that price and quality discrimination will have socially adverse effects. Broadband Internet access service providers possessing market power may have an incentive to raise prices charged to content, application, and service providers and end users. Not only would that harm users overall, but it could reduce innovation at the edge of the network and cause some end users to decide not to subscribe to broadband Internet access service. Moreover, imposing a fee on content, application, and service providers could reduce total welfare more than imposing the same fee on the end users and no fee on the content, application, and service providers.¹⁶² In particular, such pricing may disproportionately affect “socially produced” content, *i.e.*, content produced collaboratively by individuals without a direct financial incentive, such as Wikipedia.¹⁶³

71. In addition, broadband Internet access service providers generally, and particularly broadband Internet access service providers with market power, may have the incentive and ability to reduce or fail to increase the transmission capacity available for standard best-effort¹⁶⁴ Internet access service, particularly relative to other services they offer, in order to increase the revenues obtained from content, application, and service providers or individual users who desire a higher quality of service.¹⁶⁵

¹⁶⁰ If content, application, and service providers were able to pass these fees on to users, then arguably competition might limit the fees by inducing users to switch from broadband Internet access service providers that charged a fee. As a practical matter, however, this appears unlikely in general, since for many applications, the content, application, and service providers do not charge users for access; and it is not clear that it would be practical for providers who do charge for their content, applications, and services, to pass these charges on to users and to explain the reason for this pass-through. Moreover, because content, application, and service providers need to reach as many “eyeballs” as possible, they may be reluctant to refuse to deliver traffic to a broadband Internet access service provider that was attempting to charge a fee. Finally, even if the content, application, or service provider decided to refuse to deliver traffic in response to a proposed fee, users may decline to change broadband Internet access service providers due to switching costs or because they do not consider the particular content, application, or service to be essential.

¹⁶¹ Market power is the “ability profitably to maintain prices above competitive levels for a significant period of time.” Sellers with market power also may lessen competition on dimensions other than price, such as product quality, service, or innovation. See FED. TRADE COMM’N & U.S. DEP’T OF JUSTICE, HORIZONTAL MERGER GUIDELINES 2 (1997), available at <http://www.ftc.gov/bc/docs/hmg080617.pdf>. Firms may also be able to adopt practices (such as bundling or tying) that “lock in” customers. See Jan Kramer, *Service Bundling and Quality Competition on Converging Communications Markets: A Game-Theoretic Analysis* at 54–58, 75–85 (Sept. 8, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1265047 (discussing the strategies of product differentiation, bundling, and tying and their effects on communications markets).

¹⁶² Economides, *Digital Distribution*, 4 *VS: A J. OF L. & POL. FOR THE INFO. SOC’Y* at 224; see also Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 *J. ON TELECOMM. AND HIGH TECH. L.* at 38.

¹⁶³ Hemphill, *False Promise*, 25 *YALE J. ON REG.* at 160.

¹⁶⁴ The protocols used for Internet access were designed to accommodate a system of interconnected networks in which network providers would not guarantee the quality of service their users experienced. Instead, network providers promised to use their best effort to route all traffic in a manner that would minimize (but likely not eliminate) the delay or loss of data. See Schwartz & Weiser, *Introduction to Network Neutrality*, 8 *REV. OF NETWORK ECON.* at 1–2.

¹⁶⁵ See Peha, *Quest for a Balanced Policy*, 1 *INT’L J. OF COMM.* at 654 (“[T]hese efficient pricing mechanisms may lead to higher prices and potentially greater profit when the network is congested than when it is not congested. Thus, although such prices may give users incentives for efficiency, they may give network operators a reason to (continued . . .)

The result may be insufficient transmission capacity allocated to some content, application, or service providers and a misallocation of transmission capacity across quality-of-service classes.

72. Where broadband Internet access service providers have market power and are vertically integrated or affiliated with content, application, or service providers, additional concerns may arise. By providing a user's broadband connection to the Internet, a broadband Internet access service provider serves as a gatekeeper to the content, applications, and services offered on the Internet. Broadband Internet access service providers have an incentive to use this gatekeeper role to make it more difficult or expensive for end users to access services competing with those offered by the network operator or its affiliates.¹⁶⁶ For example, a broadband Internet access service provider that is also a pay television provider could charge providers or end users more to transmit or receive video programming over the Internet in order to protect the broadband Internet access service provider's own pay television service. Alternatively, such a broadband Internet access service provider could seek to protect its pay television service by degrading the performance of video programming delivered over the Internet by third parties. The result may be higher prices or worse service for some content and applications and inefficiently low investment in some content and application markets.¹⁶⁷

73. This analysis is further complicated by control that the broadband Internet access service provider has over the delivery of traffic to its subscribers. In particular, there are typically multiple paths for routing packets over the Internet.¹⁶⁸ For those packets to reach the end users that subscribe to a particular broadband Internet access service, however, they ultimately must be transported on that broadband Internet access service provider's network. Thus, even if there is competition among broadband Internet access service providers, once an end-user customer has chosen to subscribe to a particular broadband Internet access service provider, this may give that broadband Internet access service provider the ability, at least in theory, to favor or disfavor any traffic destined for that subscriber. And as

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prefer congestion, *i.e.*, to profit from providing inadequate capacity.”); *see also* Economides, *Digital Distribution*, 4 I/S: A J. OF L. & POL. FOR THE INFO. SOC'Y at 224–25 (2008) (“When selling to residential customers, a last mile monopolist carrier typically has the incentive to reduce the capacity of “plain” broadband Internet access service so that it can establish a “premium” service at a higher price . . .”).

¹⁶⁶ *See, e.g.*, Letter from Jon Peha, Professor of Electrical Engineering and Public Policy, Associate Director, Center for Wireless & Broadband Networking, Carnegie Mellon University, WC Docket No. 07-52, at 7 (filed Apr. 4, 2008); Center for Democracy and Technology June 15, 2007 Comments, WC Docket No. 07-52, at 6–7 & App.; Vuze Petition for Rulemaking, WC Docket No. 07-52, at 14–15 (filed Nov. 14, 2007); *see also* Petition To Deny of Verizon Telephone Companies and Verizon Internet Solutions d/b/a Verizon.net, *Applications for Consent to the Transfer of Control of Licenses From Comcast Corporation and AT&T Corp., to AT&T Comcast Corporation*, MB Docket No. 02-70, at 22 (Apr. 29, 2002) (arguing that an ISP that distributes its own video programming will have a strong incentive to use any market power it has over broadband content to steer the development of broadband Internet access away from content that would compete with its own video programming); SBC May 2, 2002 Comments, MB Docket No. 02-70, at 16 (recognizing that an ISP with a substantial interest in Internet content would have the incentive and ability to discriminate in favor of affiliated content providers).

¹⁶⁷ *See* van Schewick, *Towards an Economic Framework*, 5 J. ON TELECOMM. AND HIGH TECH. L. at 9; Economides, *Digital Distribution*, 4 I/S: A J. OF L. & POL. FOR THE INFO. SOC'Y at 226–27; *cf.* Gerald Faulhaber, *Network Neutrality: The Debate Evolves*, 1 INT'L J. OF COMM. 680, 691 (2007) (Faulhaber, *Network Neutrality*) (“In a duopoly market” application providers paying an ISP to be an exclusive provider in a market “could be a concern.” “[P]roving that a vertical practice is on the net deleterious is usually quite difficult and highly dependent upon the models assumed.”).

¹⁶⁸ *See, e.g.*, Kevin Werbach, *DIGITAL TORNADO: THE INTERNET AND TELECOMMUNICATIONS POLICY* 17, (FCC, Working Paper No. 29, 1997).

discussed throughout this section,¹⁶⁹ there may be various circumstances when the broadband Internet access service provider would have the incentive to do so.

74. Opponents have responded that the markets for broadband Internet access services are sufficiently competitive to allay these concerns.¹⁷⁰ They further contend that, even if a broadband Internet access service provider possessed market power, it generally would have an incentive to discriminate only in a socially efficient manner.¹⁷¹ Finally, opponents argue that, even if broadband Internet access service providers occasionally discriminate in a socially inefficient manner, open Internet policies would impose greater costs and inefficiency than the absence of policies.¹⁷²

c. Speech and Civic Participation

75. Congress has recognized that the Internet “offer[s] a forum for a true diversity of political discourse, unique opportunities for cultural development, and myriad avenues for intellectual activity.”¹⁷³ Numerous judicial opinions have noted the Internet’s potential for facilitating speech.¹⁷⁴ The bipartisan Knight Commission recently reported that the Internet has brought about “new forms of collaboration between full-time journalists and the general citizenry,” opening the age of networked journalism.¹⁷⁵ It also observed that “[p]olitical leaders and many government agencies are staking out ambitious agendas for openness,” and “[t]he potential for using technology to create a more transparent and connected

¹⁶⁹ See *supra* section IV.A.3.a, *infra* sections IV.A.3.c, IV.A.3.d.

¹⁷⁰ See, e.g., Daniel F. Spulber & Christopher S. Yoo, *Rethinking Broadband Internet Access*, 22 HARV. J.L. & TECH. 1 (2008) (arguing “that the emergence of competition in last-mile broadband services has undercut many of the classic bases for regulation,” and that “the increased importance of investment incentives, the complexity of the relevant interfaces, and the rapid pace of technological advancement also effect fundamental changes to the policy analysis”).

¹⁷¹ See, e.g., Joseph Farrell & Phil Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85, 97 (2003); Robert Hahn & Scott Wallsten, *The Economics of Net Neutrality*, AEI-Brookings Joint Center for Regulatory Affairs, at 5 (2006), http://aei-brookings.org/admin/authorpdfs/redirect-safely.php?fname=../pdffiles/ForReposting_6-19-06.pdf (“Even if some service providers could exercise some market power, the multi-sided nature of the market means that they still have powerful incentives to offer a wide array of content. Suppose AT&T tries to charge Google for the right to stream video over its high speed fiber and Google refuses to pay. AT&T might allow unfettered access to Google anyway because customers want it. The point is that even firms with market power in one part of the market will not necessarily be able to control content.”).

¹⁷² Faulhaber, *Network Neutrality*, 1 INT’L J. OF COMM. at 693.

¹⁷³ 47 U.S.C. § 230(a)(3).

¹⁷⁴ See, e.g., *Reno v. ACLU*, 521 U.S. 844, 853 (1997) (“From the publishers’ point of view, [the Internet] constitutes a vast platform from which to address and hear from a worldwide audience of millions of readers, viewers, researchers, and buyers. Any person or organization with a computer connected to the Internet can publish information. Publishers include government agencies, educational institutions, commercial entities, advocacy groups, and individuals. Publishers may either make their material available to the entire pool of Internet users, or confine access to a selected group, such as those willing to pay for the privilege. No single organization controls any membership in the Web, nor is there any single centralized point from which individual Web sites or services can be blocked from the Web.” (footnotes, internal quotation marks, and citations omitted)); *Blumenthal v. Drudge*, 992 F. Supp. 44, 48 (D.D.C. 1998) (The Internet “enables people to communicate with one another with unprecedented speed and efficiency and is rapidly revolutionizing how people share and receive information.”).

¹⁷⁵ THE KNIGHT COMMISSION, *INFORMING COMMUNITIES: SUSTAINING DEMOCRACY IN THE DIGITAL AGE* 28 (Oct. 2009) (KNIGHT COMMISSION, *INFORMING COMMUNITIES*), available at <https://secure.nmmstream.net/anon.newmediamill/aspn/kcfinalenglishbookweb.pdf>.

democracy has never seemed brighter.”¹⁷⁶ At the same time, however, broadband Internet access service providers today could block, slow, or redirect access to websites espousing public policy positions that the broadband Internet access service provider considers contrary to its interests, or controversial content to which the service provider wants to avoid any connection. Broadband Internet access service providers also have the ability to delete or hinder email based on inspection of its contents.¹⁷⁷ Because broadband Internet access service providers are not government actors, the First Amendment does not directly govern their actions.¹⁷⁸

76. Proponents therefore argue that the Commission should take steps to preserve the Internet “as a general purpose technology that supports wide open speech.”¹⁷⁹ Others have argued that “the openness of networks [is] essential to meeting community information needs,”¹⁸⁰ and that the Internet could be conceived of as a “new marketplace of ideas”¹⁸¹—a “core common infrastructure” that “giv[es] users the capacity to participate in building our common informational and cultural environment and the freedom to construct their personal information environment that is the greatest promise of networked communications.”¹⁸²

77. Some proponents of oversight have thus argued that the Commission should apply a standard similar to strict scrutiny to content-based discrimination, to ensure that any discrimination be carefully tailored to serve the public interest, not merely a private interest.¹⁸³ (As discussed below, we do not adopt this standard in the draft rules we propose. See discussion at paragraph 137.) Some parties

¹⁷⁶ *Id.* at 5.

¹⁷⁷ See Peha, *Quest for a Balanced Policy*, 1 INT’L J. OF COMM. at 655 (“A network operator with sufficient market power clearly has the ability to stifle speech, and sometimes it will have the incentive.”).

¹⁷⁸ See, e.g., *Green v. AOL*, 318 F.3d 465 (3rd Cir. 2003) (“We are unpersuaded by Green’s contentions that AOL is transformed into a state actor because AOL provides a connection to the Internet on which government and taxpayer-funded websites are found, and because AOL opens its network to the public whenever an AOL member accesses the Internet and receives email or other messages from non-members of AOL.” (citing *Lloyd Corp. v. Tanner*, 407 U.S. 551, 569 (1972) (holding that private property does not lose its private character merely because the public is generally invited to use it for designated purposes))).

¹⁷⁹ Letter from Marvin Ammori, General Counsel, Free Press, to Marlene H. Dortch, Secretary, FCC, WC Docket 07-52, at 11 (filed June 12, 2008); see also, e.g., ACLU Apr. 7, 2008 Comments, WC Docket No. 07-52, WT Docket No. 08-7; Media Access Project June 8, 2008 Comments, GN Docket No. 09-51.

¹⁸⁰ KNIGHT COMMISSION, INFORMING COMMUNITIES 50; see also *id.* (“Recommendation 9: Maintain the national commitment to open networks as a core objective of Internet policy.”).

¹⁸¹ *Reno v. ACLU*, 521 U.S. 844, 885 (1997).

¹⁸² Yochai Benkler, *Property, Commons, and the First Amendment: Towards a Core Common Infrastructure*, at 13 (white paper for the First Amendment Program Brennan Center for Justice at NYU School of Law 2001); see also *id.* at 12–13 (“The radical potential presented by computer networks is their potential to reverse the trend of increasing costs of effective communications and its attendant concentration and commodification of the capacity to communicate effectively as an active participant in social, political, and cultural discourse. The cost of connected personal computers is orders of magnitude lower than the cost of television broadcast stations, cable systems, or large-circulation presses. Low cost processors put at the fingertips of individuals functionalities for information collection and manipulation that were available only to large corporations or governments only a decade ago. Low cost access to the global network gives these individuals a communicative reach available only to the largest of media conglomerates a mere few years ago.”); YOCHAI BENKLER, *THE WEALTH OF NETWORKS* 261–65 (Yale Press 2006) (describing examples of Internet communications serving the “watchdog” role and as a tool for political organization).

¹⁸³ Letter from Marvin Ammori, General Counsel, Free Press, to Marlene H. Dortch, Secretary, FCC, WC Docket 07-52, at 7–8 (filed June 12, 2008).

further argue that broadband Internet access service providers should not be left to balance among competing public interests themselves, but rather that the Commission (or other government entity) must be the one to do so.¹⁸⁴ In support of such oversight, proponents note that the government has undertaken a role in promoting communications technologies as a channel for speech and democratic content in other contexts, such as the cable “must carry” rules.¹⁸⁵

78. Opponents respond that such policies are unnecessary. In particular, they claim that a “firestorm of controversy . . . would erupt if a major network owner embarked on a systematic campaign of censorship on its network,” thus mitigating the need for formal policies.¹⁸⁶

d. Congestion

79. The existence of congestion in the network is a major motivating factor in the open Internet debate, and is central to arguments that differential pricing or service quality is necessary. Moreover, because the effects of delays or dropping of packets arising from congestion are not the same for all applications, broadband Internet access service providers and content, application, and service providers may have incentives to seek agreements for the prioritization of traffic or other quality of service guarantees.¹⁸⁷ Permitting these activities without appropriate oversight could lead to a number of harms, undermining the public interest goals of the Act discussed above.¹⁸⁸

80. Although network operators may seek to alleviate congestion by increasing capacity, such actions would involve costs—in some cases large costs—and revenue opportunities might not justify the required investment. As a result, we must balance the need for incentives for infrastructure investment with the need to ensure that network operators do not adopt congestion management measures that could undermine the usefulness of the Internet to the public as a whole. We seek further comment on these issues below.

4. Next Steps

81. We summarized above a number of the key arguments in the ongoing open Internet debate. We recognize, however, that this summary may be incomplete. Thus, we seek comment on what other considerations should inform our analysis. We also seek qualitative or quantitative evidence and analysis that illuminates any of the above arguments, including specific examples. To what extent are particular arguments independent of competitive conclusions regarding particular markets for broadband Internet access services? Even in effectively competitive markets for broadband Internet access service, what impact do switching costs and consumer lock-in effects have on broadband Internet access service providers’ ability to act in ways that limit innovation in content, applications, and services and/or reduce overall welfare? To the extent that certain arguments do depend upon the particular competitive state of a market, how should the Commission define and evaluate such markets? What specific evidence is there regarding the competitive state of those markets? We also seek comment on whether and to what extent

¹⁸⁴ See, e.g., *id.*

¹⁸⁵ *Turner Broad. Sys. Inc. v. FCC*, 520 U.S. 180 (1997); *Turner Broad. Sys. Inc. v. FCC*, 512 U.S. 622, 663–64 (1994).

¹⁸⁶ Timothy B. Lee, *The Durable Internet: Preserving Network Neutrality Without Regulation*, Cato Institute, Policy Analysis No. 626, Nov. 12, 2008 at 23. *But see* American Civil Liberties Union et al. Apr. 16, 2008 Comments, WC Docket Nos. 07-52, 08-7, at 9 (arguing that reaction to Comcast’s action against BitTorrent was due, among other things, to “a powerful government regulator debating the wisdom of intervening,” and concluding that “[o]nce the issue is settled, the power will swing decisively to the side of the providers”).

¹⁸⁷ See, e.g., Peha, *Quest for a Balanced Policy*, 1 INT’L J. OF COMM. at 651.

¹⁸⁸ See, e.g., 47 U.S.C. §§ 230(b), 1302(a).

application of the generally applicable antitrust laws is sufficient to address the concerns we identify here. We further seek comment on the effect of our decision to promulgate or not promulgate rules on the availability of antitrust law to address anticompetitive conduct in the broadband Internet access service market, particularly in light of *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*¹⁸⁹ and *Credit Suisse Securities (USA) LLC v. Billing*.¹⁹⁰ We note that policymakers in a number of other countries are considering similar issues,¹⁹¹ and we seek comment on the analyses of these issues that have been raised in those contexts, as well.

82. We also seek comment on possible implications that the draft rules we propose here might have on efforts to close the digital divide and encourage robust broadband adoption and participation in the Internet community by minorities and other socially and economically disadvantaged groups. According to a recent study, broadband adoption varies significantly across demographic groups,¹⁹² and African Americans, Hispanics, and lower-income Americans, among others, trail the national average in home broadband adoption.¹⁹³ This disparity among broadband adoption rates is significant and impacts efforts to promote employment, education, healthcare, and consumer welfare.¹⁹⁴ Minorities and other socially and economically disadvantaged groups may also face unique or particularly high barriers to innovation, communication, and civic participation on the Internet, and may be susceptible to discrimination. This may make open Internet protections particularly important for these groups. We invite comment on these and related issues.

¹⁸⁹ 540 U.S. 398 (2004).

¹⁹⁰ 551 U.S. 264 (2007).

¹⁹¹ For example, Japan's Ministry of Communications has urged industry associations to arrive at guidelines for packet shaping. See Japan Internet Providers Association, Telecommunications Carriers Association, Telecom Services Association, Japan Cable and Telecommunications Association, *Guideline for Packet Shaping* (May 2008), available at http://www.jaipa.or.jp/other/bandwidth/guidelines_e.pdf. In Canada, the Canadian Radio-television Telecommunications Commission (CRTC) has adopted rules prohibiting unreasonable discrimination by ISPs, defining the contours of reasonable traffic management, and requiring ISPs to be transparent about their traffic management practices. See CRTC, *Review of the Internet traffic management practices of Internet service providers*, Telecom Regulatory Policy CRTC 2009-657, File No. 8646-C12-200815400 (Oct. 21, 2009), available at <http://crtc.gc.ca/eng/archive/2009/2009-657.htm>. The European Union (EU) is currently considering a telecom reform package that contains several provisions relating to network neutrality. See EU eCommunications, *Reforming the current telecom rules*, http://ec.europa.eu/information_society/policy/ecommm/tomorrow/index_en.htm (last visited Oct. 21, 2009); EU eCommunications, *Legislative Proposals List*, http://ec.europa.eu/information_society/policy/ecommm/library/proposals/index_en.htm (last visited Oct. 21, 2009). Norway's Norwegian Post and Telecommunications Authority established some guidelines for network neutrality this past February, including transparency and nondiscrimination principles. See Norwegian Post and Telecommunications Authority, *Network Neutrality: Guidelines for Internet neutrality* (Feb. 24, 2009), available at <http://www.npt.no/ikbViewer/Content/109604/Guidelines%20for%20network%20neutrality.pdf>.

¹⁹² See PEW INTERNET & AMERICAN LIFE PROJECT, HOME BROADBAND ADOPTION (June 2009) (PEW HOME BROADBAND ADOPTION REPORT).

¹⁹³ See Commission Open Meeting Presentation on the Status of the Commission's Processes for Development of a National Broadband Plan 82 (Sept. 29, 2009), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf (citing PEW HOME BROADBAND ADOPTION REPORT and including both English and Spanish speaking Hispanics).

¹⁹⁴ *Id.* at 83 (discussing the negative implications for non-adopters in the areas of employment, education, news, healthcare, and consumer welfare).

B. Our Authority to Prescribe Rules Implementing Federal Internet Policy

83. Consistent with the *Comcast Network Management Practices Order*, we may exercise jurisdiction under the Act to regulate the network practices of facilities-based broadband Internet access service providers. We have ancillary jurisdiction over matters not directly addressed in the Act when the subject matter falls within the agency's general statutory grant of jurisdiction and the regulation is "reasonably ancillary to the effective performance of the Commission's various responsibilities."¹⁹⁵ That test is met with respect to broadband Internet access service.¹⁹⁶

84. As explained in the *Comcast Network Management Practices Order*, we believe that exercising ancillary authority over facilities-based Internet access will "promote the objectives for which the Commission has been [specifically] assigned jurisdiction" and "further the achievement of . . . [legitimate] regulatory goals."¹⁹⁷ The proposed rules we enunciate here will, we believe, advance the federal Internet policy set forth by Congress in section 230(b) as well as the broadband goals that section 706(a) of the Telecommunications Act of 1996 charges the Commission with achieving.¹⁹⁸ Section 201(b), moreover, gives the Commission specific authority "to prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of th[e] Act."¹⁹⁹

85. Voice and video services are increasingly delivered over the Internet, in actual or potential competition with voice and video offerings of companies that provide broadband Internet access. This growing interrelationship with voice and video services that the Commission has traditionally regulated pursuant to express statutory obligations and its general public interest mandate further supports the Commission's consideration of regulatory requirements for the provision of broadband Internet access service, and its ancillary jurisdiction to establish appropriate rules.

86. With respect to Internet access via spectrum-based facilities, we have additional authority pursuant to Title III of the Communications Act.²⁰⁰ We have recognized previously that the spectrum allocation and licensing provisions of Title III and the Commission's rules continue to apply to wireless broadband Internet access services because these services use radio spectrum.²⁰¹ We have relied upon Title III authority in the past to regulate services provided by wireless carriers.²⁰²

¹⁹⁵ *United States v. Southwestern Cable Co.*, 392 U.S. 157, 172–73 (1968); accord *United States v. Midwest Video Corp.*, 406 U.S. 649, 662 (1972).

¹⁹⁶ *Comcast Network Management Practices Order*, 23 FCC Rcd at 13033–44, paras. 12–28; see also Brief for the FCC and the United States in *Comcast v. FCC*, No. 08-1291, at 25–50 (filed Sept. 21, 2009), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293573A1.pdf.

¹⁹⁷ *Midwest Video I*, 406 U.S. at 667.

¹⁹⁸ See 47 U.S.C. §§ 230(b), 1302(a).

¹⁹⁹ 47 U.S.C. § 201(b); *AT&T Corp. v. Iowa Utilities Bd.*, 525 U.S. 366, 378 ("We think that the grant in § 201(b) means what it says: The FCC has rulemaking authority to carry out the 'provisions of this Act.'"); see also *Alliance for Community Media v. FCC*, 529 F.3d 763, 772–74 (6th Cir. 2008) (holding that section 201(b) gives FCC authority to issue rules implementing all portions of the Communications Act), *cert. denied*, 129 S. Ct. 2821 (2009).

²⁰⁰ Title III of the Communications Act (47 U.S.C. §§ 301–399B) contains provisions relating to use of the radio spectrum, including the Commission's broad authority over spectrum allocation (see, e.g., 47 U.S.C. § 303) and licensing (see, e.g., 47 U.S.C. §§ 301, 307, 308), including use of auctions (47 U.S.C. § 309(i)).

²⁰¹ *Wireless Broadband Classification Order*, 22 FCC Rcd at 5914–15.

²⁰² See, e.g., *Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, CC Docket No. 94-54, Memorandum Opinion and Order on Reconsideration, 14 FCC Rcd 16340, 16352–53, para. 27 (1999).

87. We invite comment on our view that we have jurisdiction over broadband Internet access service sufficient to adopt and enforce the proposed rules, or other rules that commenters propose.

C. Codifying the Existing Four Internet Principles

88. We believe that the four Internet principles have performed effectively their role of explicating statutory federal Internet policy.²⁰³ At the time the Commission adopted the principles, it stated that they were not rules but that it would “incorporate the above principles into its ongoing policymaking activities.”²⁰⁴ Those ongoing activities included a broadband practices proceeding,²⁰⁵ two public field hearings,²⁰⁶ and an enforcement action.²⁰⁷ After four years of evaluating market developments, we now believe it is appropriate to codify the four principles. Codification will increase certainty regarding the Commission’s approach to preserving the open Internet.

89. We propose to codify the four principles at their current level of generality. Doing so will help establish clear requirements while giving us the flexibility to consider particular circumstances case by case. In that way, we will be able to generate over time a body of law that develops as technology and the marketplace evolve. As one commenter observed, “given the extraordinarily rapid and wholly unpredictable evolution of services and applications, we see the need for policymaking principles centered on supporting innovation and protecting consumer interests in an agile, rather than prescriptive, way.”²⁰⁸

90. We also propose to codify the principles as obligations of broadband Internet access service providers, rather than as describing what “consumers are entitled” to do with their service, as the original Internet principles were phrased. We believe that codifying them as obligations of particular entities, rather than just as principles, would make clear precisely who must comply and in what way.

²⁰³ See, e.g., Verizon and Verizon Wireless June 8, 2009 Comments, GN Docket No. 09-51, at 86 (“These principles have helped to guide wireline providers’ practices and to ensure that consumers’ expectations for their public Internet access services are met.”); USTA June 8, 2009 Comments, GN Docket No. 09-51, at 24 (“More than three years of experience under that Policy Statement has demonstrated its successful balancing of interests among stakeholders—consumers, broadband service providers, application and content providers and technology companies.”); AT&T June 8, 2009 Comments, GN Docket No. 09-51, at 102 (“[T]he Commission should reaffirm that the current oversight formula—which relies on targeted enforcement of the *Internet Policy Statement* to safeguard openness in the Internet ecosystem—strikes the right balance and should be relied on going forward. The [National Broadband] Plan should endorse the Commission’s proven *post hoc* enforcement policies and oversight to serve as a backstop to a market that is functioning well and producing desired, beneficial results.”); Qwest June 8, 2009 Comments, GN Docket No. 09-51, at 22 (“[T]here is no need for additional Internet regulation at this time and the Commission’s Policy Statement remains adequate . . .”). We note that the four principles have been incorporated into a Free Trade Agreement signed by the United States and the Republic of Korea on June 30, 2007. See http://www.ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file816_12714.pdf (Article 15.7).

²⁰⁴ *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 5.

²⁰⁵ See *Notice of Inquiry*, 22 FCC Rcd 7894.

²⁰⁶ The Commission held a public hearing at Harvard Law School in Cambridge, Massachusetts, see FCC, Broadband Network Management Practices En Banc Public Hearing I (Feb. 25, 2008), http://www.fcc.gov/broadband_network_management/hearing-ma022508.html, and at Stanford Law School in Palo Alto, California, see FCC, Broadband Network Management Practices En Banc Public Hearing II (Apr. 17, 2008), http://www.fcc.gov/broadband_network_management/hearing-ca041708.html.

²⁰⁷ See *Comcast Network Management Practices Order*, 23 FCC Rcd 13028.

²⁰⁸ Microsoft June 8, 2009 Comments, GN Docket No. 09-51, at 9–10.

Making these rules apply to particular entities will also provide certainty to all Internet participants as to what to expect and who bears responsibility for what types of actions.

91. Finally, we affirm that these principles apply to all providers of Internet access service (other than via dial-up), regardless of the technology over which such service is delivered.²⁰⁹ We recognize that in other contexts, the term “broadband” may be used differently. We believe, however, that defining broadband here to encompass all non-dial-up Internet access will ensure that our open Internet rules benefit as many users as possible and have broad application to protect the open Internet, however accessed. We seek comment on this approach to defining “broadband.”

92. Specifically, we propose that all providers of broadband Internet access service must comply with the following four rules:

1. *Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from sending or receiving the lawful content of the user's choice over the Internet.*
2. *Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from running the lawful applications or using the lawful services of the user's choice.*
3. *Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from connecting to and using on its network the user's choice of lawful devices that do not harm the network.*
4. *Subject to reasonable network management, a provider of broadband Internet access service may not deprive any of its users of the user's entitlement to competition among network providers, application providers, service providers, and content providers.*

93. We believe that applying these rules to all providers of broadband Internet access service would support the statutory and policy goals we articulated above.²¹⁰ First, these rules would support our goals of protecting consumers and encouraging innovation and investment.²¹¹ Ensuring that users can send and receive content, run applications, and use services of their choice allows them to take advantage of the diverse results of past investment and innovation, which in turn encourages further innovation and investment, and research and development. Likewise, ensuring that users can connect the devices of their choice to the network would encourage investment and innovation in the device market, and permits customers to change Internet access service providers more easily, which in turn would encourage more innovation among providers to win their business.

²⁰⁹ We propose that these rules should not apply to dial-up Internet access service. Title II regulation applies to users' telephone connections to dial-up Internet access service providers, and the Commission's interpretation of those obligations appears to have resulted in a market for dial-up Internet access service providers that does not present the same concerns (described in section IV.A.3) as the market for broadband Internet access. In addition, because of the lower speed of dial-up Internet access service, many of the Internet applications and services that may benefit from quality-of-service assurances and that raise the greatest concerns regarding discrimination are unavailable over dial-up Internet connections as a practical matter. We seek comment on our proposal. We note that our use of the term “broadband Internet access service” in the context of this Notice does not prejudge how the Commission might define that term in other contexts. *See, e.g., Comment Sought on Defining “Broadband,”* GN Docket No. 09-51, National Broadband Plan Public Notice #1, DA 09-1842, at I (Aug. 20, 2009) (seeking “tailored comment on defining ‘broadband’ for purposes of the Commission’s development of a National Broadband Plan . . . pursuant to the American Recovery and Reinvestment Act of 2009 . . . and for related purposes”).

²¹⁰ *See supra* section IV.A.1.

²¹¹ *See supra* para. 51.

94. Second, these rules would support our goals of promoting competition.²¹² They would promote competition in the upstream markets for content, applications, and services by ensuring that users can take advantage of any offerings, not just those that are approved or selected by their Internet access service provider. These rules would also support our goals of promoting consumer protection, user empowerment, speech, and democratic participation.²¹³

95. We now address each principle in turn. The first principle in the *Internet Policy Statement*, and the first rule we propose to codify here, ensures that users are in control of the content that they send and receive. Making sure that users can express themselves freely on the Internet and receive the content of their choice ensures that users are unconstrained by broadband Internet access service providers in their ability to participate in the marketplace of ideas. Indeed, to further this interest in encouraging freedom of expression, we propose that the first rule make explicit that users can both *send* the content of their choice and *receive* the content of their choice. While the *Internet Policy Statement* principle referred only to users' "access" to content,²¹⁴ we believe that the ability of a user to produce or distribute content is just as important as the ability to receive it.²¹⁵ Indeed, anyone who posts a comment on a blog is "sending" content.

96. The second principle in the original *Internet Policy Statement* protects the ability of consumers to run applications and use services of their choice, subject to the needs of law enforcement.²¹⁶ As explained below,²¹⁷ we propose that *all* the principles be subject to the needs of law enforcement, as well as public safety, and national and homeland security, by proposing separate draft rules on these topics. As explained in more detail below, we intend to leave sufficient flexibility in all our rules to allow broadband Internet access service providers to address law enforcement, public safety, and national and homeland security needs. Furthermore, we have no intention of protecting unlawful activities in these rules. Therefore, for additional precision, we add the word "lawful" to the proposed second rule to make clear that nothing here requires broadband Internet access service providers to allow users to engage in unlawful activities. The addition of the word "lawful" also harmonizes the second proposed rule with the first and third.

97. The third principle in the original *Internet Policy Statement* allows users to connect their choice of legal devices that do not harm the network.²¹⁸ The proposed rule changes the word "legal" to "lawful" for harmony with the other proposed rules. We do not intend any difference in meaning by changing this particular word. In addition, the proposed rule would protect the ability of users to connect *and use* such devices. We add this clarification to avoid any overly narrow reading of the proposed rule, and as discussed below, seek comment on the application of this proposed rule to wireless networks.²¹⁹

²¹² See *supra* para. 52.

²¹³ See *supra* para. 53.

²¹⁴ See *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4 (stating that "consumers are entitled to access the lawful Internet content of their choice").

²¹⁵ This approach is consistent with the Act, which defines advanced telecommunications capability as enabling users to "*originate and receive* high-quality voice, data, graphics, and video telecommunications using any technology." 47 U.S.C. § 1302(d)(1) (*emphasis added*).

²¹⁶ See *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4.

²¹⁷ See *infra* section IV.F.2.

²¹⁸ See *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4.

²¹⁹ See *infra* section IV.H.3.

98. The fourth principle in the original *Internet Policy Statement* protects competition among network providers, application and service providers, and content providers.²²⁰ Here, we change the proposed wording of the last three types of providers—application, service, and content—to be consistent with other proposed rules. Again, no substantive difference is intended by that change.

99. We propose not to adopt a specific definition of “content, application, or service provider,” because any user of the Internet can be such a provider. For example, anyone who creates a family website for sharing photographs could be reasonably classified as a “content provider.” We believe that this broad interpretation of the phrase would reinforce the other principles and the overall goals of this rulemaking.

100. As stated, we propose that all four principles would apply to all forms of broadband Internet access service, regardless over which technology platform they are provided.²²¹ We explain below in section IV.F that all four principles would be subject to reasonable network management and the needs of law enforcement, public safety, and homeland and national security authorities. In addition, we seek comment in section IV.H on the implications of these principles for broadband Internet access over mobile wireless networks and how, and in what time frames or phases, and to what extent they can be fairly and appropriately implemented.

101. At least one commenter in this proceeding has suggested that we should read the *Internet Policy Statement* as embodying obligations binding on content, applications, and service providers in addition to broadband Internet access service providers.²²² Although the question of Internet openness at the Commission has traditionally focused on providers of broadband Internet access service,²²³ we seek

²²⁰ See *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4.

²²¹ See *infra* section IV.G.

²²² See Letter from Robert W. Quinn, Jr., Senior Vice President Federal Regulatory, AT&T Services, Inc., to Sharon Gillett, Chief, Wireline Competition Bureau, WC Docket Nos. 07-135, 07-52, at 2–3 (filed Sept. 25, 2009).

²²³ For example, the *Internet Policy Statement* was originally drafted “to ensure that broadband networks are widely deployed, open, affordable, and accessible to all consumers.” 20 FCC Rcd at 14988, para. 4. Moreover, on the same day that it voted to deregulate facilities-based DSL providers, the Commission adopted the *Policy Statement*, recognizing that some commenters in that proceeding had asked for specific content-related requirements on broadband Internet access service providers. See *Wireline Broadband Order*, 20 FCC Rcd at 14904, para. 96. Then-Chairman Martin noted that day that “[t]he Commission also releases today a policy statement that reflects each Commissioner’s core beliefs about certain rights all consumers of broadband Internet access should have.” *Id.* at 14976 (Statement of Chairman Kevin J. Martin). And Commissioner Copps noted that “[w]e need a watchful eye to ensure that network providers do not become Internet gatekeepers, with the ability to dictate who can use the Internet and for what purpose. Consumers do not want to be told that they cannot use their DSL line for VoIP, for streaming video, to access a particular news website, or to play on a particular company’s game machine.” *Id.* at 14980 (Statement of Commissioner Michael J. Copps, concurring). Indeed, the *Internet Policy Statement* was placed in five already-opened dockets dealing with issues relating to Internet access service providers, but it was not placed in the docket most likely to address content, applications, and services—the *IP-Enabled Services* docket. See *Internet Policy Statement*, 20 FCC Rcd at 14986 (identify six proceedings in five dockets: *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02-33; *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, CC Docket No. 01-337; *Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements*, CC Docket Nos. 95-20, 98-10; *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, GN Docket No. 00-185; *Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, CS Docket No. 02-52). And in the *Comcast Network Management Practices Order*, the Commission noted that the *Internet Policy Statement* was “part-and-parcel” of the decision to deregulate broadband Internet access service. 23 FCC Rcd at 13047, para. 34.

comment on the pros and cons of phrasing one or more of the Internet openness principles as obligations of other entities, in addition to providers of broadband Internet access service.

102. We also seek comment in general on our formulation of these proposed rules, including whether the fourth principle is appropriate for codification as a rule or whether the other rules we propose in this Notice adequately achieve the fourth principle's purposes. We seek comment, including any applicable data and specific examples, on the likely costs and benefits of each of these proposed rules. We also seek comment on whether and how codifying these principles will promote free speech, civic participation, and democratic engagement. Will codifying these principles help preserve the Internet's status as "a forum for a true diversity of political discourse"²²⁴ and an open platform for publication of information?²²⁵

D. Codifying a Principle of Nondiscrimination

103. As discussed above, the ability of network operators to discriminate in price or service quality among different types of traffic or different providers or users may impose significant social costs, particularly if the discrimination is motivated by anticompetitive purposes. At the same time, we recognize that traffic on the Internet is increasing rapidly and that broadband Internet access service providers must be able to manage their networks and experiment with new technologies and business models in ways that benefit consumers. The key issue we face is distinguishing socially beneficial discrimination from socially harmful discrimination in a workable manner.²²⁶

104. Based on the record,²²⁷ we propose a general rule prohibiting a broadband Internet access service provider from discriminating against, or in favor of, any content, application, or service, subject to reasonable network management. More specifically we propose the following new rule:

5. *Subject to reasonable network management, a provider of broadband Internet access service must treat lawful content, applications, and services in a nondiscriminatory manner.*

105. We further propose that, as with the previous four rules, this rule should be subject to exceptions for the needs of law enforcement, public safety, national and homeland security authorities, as discussed at greater length below.²²⁸

²²⁴ 47 U.S.C. § 230(a)(3).

²²⁵ *Reno v. ACLU*, 521 U.S. at 853.

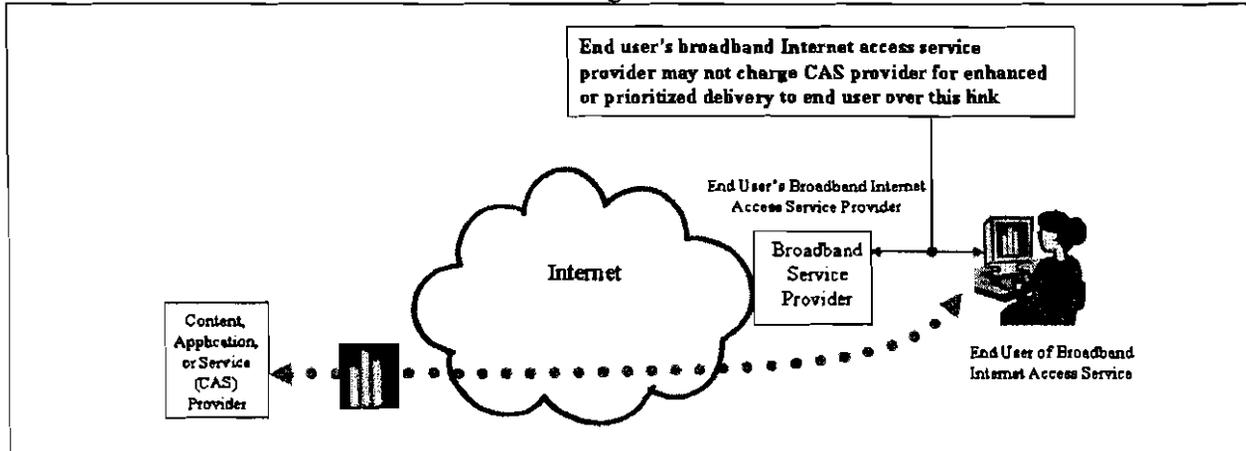
²²⁶ One author poses the regulatory question as follows: "Can we limit how network operators can discriminate in a manner that [1] prevents them from fully exploiting market power in ways that seriously harm users, and [2] does not prevent them from using discrimination in ways that greatly benefit users?" Peha, *Quest for a Balanced Policy*, 1 INT'L J. COMM. at 645; see also Robert D. Atkinson & Philip J. Weiser, *A "Third Way" on Network Neutrality*, The Information Technology and Innovation Foundation (May 30, 2006).

²²⁷ See, e.g., British Telecom June 15, 2007 Comments, WC Docket No. 07-52, at 8-12; CFA et al. June 15, 2007 Comments, WC Docket No. 07-52, at 110-23; CDT June 15, 2007 Comments, WC Docket No. 07-52, at 14; Google June 15, 2007 Comments, WC Docket No. 07-52, at 37-40; Nebraska Rural June 15, 2007 Comments, WC Docket No. 07-52, at 7-8; see also Legacy AT&T May 28, 2004 Comments, WC Docket 04-36, at 54 ("The Commission should forbid any entity providing broadband access from impeding access to the Internet content of another applications provider, except where such access would threaten the integrity of the network or where required by law. Moreover, the Commission should forbid broadband transport providers not only from blocking outright access to particular IP applications, but also from giving any kind of preferential access to their own IP applications or degrading access to rival IP applications.").

²²⁸ See *infra* section IV.F.

106. We understand the term “nondiscriminatory” to mean that a broadband Internet access service provider may not charge a content, application, or service provider for enhanced or prioritized access to the subscribers of the broadband Internet access service provider, as illustrated in the diagram below. We propose that this rule would not prevent a broadband Internet access service provider from charging subscribers different prices for different services. We seek comment on each of these proposals. We also seek comment on whether the specific language of this draft rule best serves the public interest.

Diagram 2



107. In defining the scope of this proposed fifth rule, we propose to focus on that portion of the connection between a broadband Internet access service subscriber and the Internet for which the broadband Internet access service provider, as discussed above,²²⁹ may have the ability and the incentive to favor or disfavor traffic destined for its end-user customers. We seek comment on this proposal, and how best to define the portion of the network subject to the fifth rule.

108. We believe that the proposed nondiscrimination rule, subject to reasonable network management and understood in the context of our proposal for a separate category of “managed” or “specialized” services (described below), may offer an appropriately light and flexible policy to preserve the open Internet. Our intent is to provide industry and consumers with clearer expectations, while accommodating the changing needs of Internet-related technologies and business practices. Greater predictability in this area will enable broadband providers to better plan for the future, relying on clear guidelines for what practices are consistent with federal Internet policy. First, as explained in detail below in section IV.H, reasonable network management would provide broadband Internet access service providers substantial flexibility to take reasonable measures to manage their networks, including but not limited to measures to address and mitigate the effects of congestion on their networks or to address quality-of-service needs, and to provide a safe and secure Internet experience for their users.²³⁰ We also recognize that what is reasonable may be different for different providers depending on what technologies they use to provide broadband Internet access service (e.g., fiber optic networks differ in many important respects from 3G and 4G wireless broadband networks). We intend reasonable network management to be meaningful and flexible. Second, as explained below in section IV.G, we recognize that some services, such as some services provided to enterprise customers, IP-enabled “cable television” delivery, facilities-based VoIP services, or a specialized telemedicine application, may be provided to end users

²²⁹ See *supra* section IV.A.3.b.

²³⁰ We also propose that broadband Internet access service providers may take action to counter unwanted or harmful traffic such as spam and malware, may decline to carry unlawful traffic, or may decline to carry traffic if the transfer of the content is prohibited by law, including copyright law. See *infra* para. 135.

over the same facilities as broadband Internet access service, but may not themselves be an Internet access service and instead may be classified as distinct managed or specialized services. These services may require enhanced quality of service to work well. As these may not be “broadband Internet access services,” none of the principles we propose would necessarily or automatically apply to these services. In this context, with a flexible approach to reasonable network management, and understanding that managed or specialized services, to which the principles do not apply in part or full, may be offered over the same facilities as those used to provide broadband Internet access service, we believe that the proposed approach to nondiscrimination will promote the goals of an open Internet.

109. We note that our proposed nondiscrimination and reasonable network management rule bears more resemblance to unqualified prohibitions on discrimination added to Title II in the 1996 Telecommunications Act than it does to the general prohibition on “*unjust or unreasonable* discrimination” by common carriers in section 202(a) of the Act.²³¹ We seek comment on whether an “unjust or unreasonable discrimination” standard would be preferable to the approach we propose. As explained above, rather than extending that common carrier standard to broadband Internet access services, we propose a general nondiscrimination rule subject to reasonable network management and specifically enumerated exceptions (including separate treatment of managed or specialized services). We believe that a bright-line rule against discrimination, subject to reasonable network management and enumerated exceptions, may better fit the unique characteristics of the Internet, which differs from other communications networks in that it was not initially designed to support just one application (like telephone and cable television networks), but rather to allow users at the edge of the network to decide toward which lawful uses to direct the network.

110. If we were to prohibit “unjust or unreasonable” discrimination by broadband providers, we anticipate that the types of discrimination that would be considered “just” and “reasonable” would likely be reasonable network management or fall within one of the exceptions described below. We base that belief on our four years of experience under the *Internet Policy Statement* and our familiarity with the debate over open Internet principles, which began well before 2005. As we note below, we believe that a case-by-case approach to providing more detailed rulings in this area is inevitable and valuable. At the same time, where we can identify and describe *ex ante* exceptions to the general nondiscrimination rule, we believe it is helpful to do so. As explained below, moreover, we propose that the nondiscrimination rule would be subject to reasonable network management, which we believe would be sufficient to address concerns that a general prohibition on discrimination lacks necessary flexibility. To be sure, the contours of our proposed exceptions would be subject to development in future adjudications. We would not, however, have to establish the exceptions themselves through that process.

111. We seek comment on these proposals. We seek comment generally on the costs and benefits of this proposed nondiscrimination rule, both in the near-term and long-term. In particular, would a rule prohibiting broadband Internet access service providers from charging content, application and service providers fees be likely to result in higher social welfare than would result in a market in which no constraints on such fees are imposed? What would the effects be on future innovation?

112. We seek comment on the effects that prohibiting charges to content, application, and service providers for enhanced or prioritized service would have on broadband Internet access service users. In discussing these issues, we encourage parties to be specific in describing whether, when, and how broadband Internet access service providers charge content, application, and service providers for prioritization of traffic today, and any consequences they believe would arise from prohibiting broadband Internet access service providers from charging for prioritization.

²³¹ Compare, e.g., 47 U.S.C. § 251(c)(2)(D) (requiring incumbent local exchange carriers to provide “interconnection” to their networks “on rates, terms, and conditions that are just, reasonable, and nondiscriminatory”) with 47 U.S.C. § 202(a).

113. More generally, we seek comment on how the proposed nondiscrimination rule would affect broadband Internet access service providers' pricing and practices, including network deployment, and the current or planned offerings of particular Internet content, application, and service providers. Are there particular content, applications, or services whose quality and utility to end users depends on a broadband Internet access service provider's assuring a certain quality of service? For example, do services such as VoIP, video conferencing, IP video, or telemedicine applications depend on discrimination in how traffic is handled? To the extent that parties believe enhanced or guaranteed quality of service is required for certain content, applications, or services, they should identify specifically the content, applications, and services for which such practices are required and explain why it is required. What would the practical differences be between permitting operators to manage their networks to assure quality of service to particular types of traffic—*e.g.*, all VoIP traffic—and the *offering* of such management for a fee or other consideration? Would the proposed nondiscrimination rule discourage innovation in or development of certain types of content, applications, or services? Should these services be more properly understood as managed or specialized services rather than broadband Internet access services?

114. Have we correctly identified the costs and benefits of the alternative approaches? Does subjecting the nondiscrimination rule to reasonable network management ensure that network operators can reasonably manage their networks consistent with the intent of preserving the free and open Internet? Does the separate regulatory category of managed or specialized services allow beneficial discrimination to serve the public? Conversely, are there any socially beneficial forms of discrimination that would not fall within the category of reasonable network management or the exceptions discussed below? If so, should we instead adopt a rule prohibiting only unreasonable discrimination? Would a rule prohibiting unreasonable discrimination permit socially beneficial discrimination that would be prohibited under a nondiscrimination rule? Would such a rule be inconsistent with the Internet's traditional operation or otherwise undermine the manifold benefits the open Internet has provided? Would a prohibition on unreasonable discrimination, standing alone, be less certain, harder to enforce, or both? Would it create greater incentives for broadband Internet access service providers to engage in socially harmful discrimination?

115. More generally, we seek comment on the relationship between the proposed rules and the requirements of Title II of the Act. For example, should the standards for evaluating discrimination be based on the Commission's precedent under either section 202 or section 272 of the Act? Has *ex post* enforcement of similar prohibitions on discrimination and unreasonable discrimination proven adequate in other contexts?

116. We also seek comment on whether our proposed nondiscrimination rule will promote free speech, civic participation, and democratic engagement. Would discrimination by access providers interfere with those goals? Conversely, would our proposed rule impose any burdens on access providers' speech that would be cognizable for purposes of the First Amendment, and if so, how? Would any burden on access providers' speech be outweighed by the speech-enabling benefits of an open Internet that provides a non-discriminatory platform for the robust interchange of ideas?

117. Finally, we note that NTIA and RUS, in administering the BTOP and BIP broadband grant and loan programs, required applicants to agree, among other things, "not [to] favor any lawful Internet applications and content over others."²³² We seek comment on how BTOP and BIP applicants

²³² See Department of Agriculture, Rural Utilities Service, Broadband Initiatives Program, RIN: 0572-ZA01, Department of Commerce, National Telecommunications and Information Administration, Broadband Technology Opportunities Program, RIN: 0660-ZA28, Notice of Funds Availability, 74 Fed. Reg. 33104, 33110–11 (July 9, 2009) (NTIA/RUS BTOP/BIP NOFA). This requirement is subject to the needs of law enforcement and reasonable network management. *Id.*

have proposed to comply with these requirements and how this might inform the Commission's definition of a nondiscrimination rule.

E. Codifying a Principle of Transparency

118. In this part, we propose to codify a sixth principle of transparency. In general, we believe that sunlight is the best disinfectant²³³ and that transparency discourages inefficient and socially harmful market behavior. As we noted in our recent *Consumer Information and Disclosure NOI*, access to accurate information plays a vital role in maintaining a well-functioning marketplace that encourages competition, innovation, low prices, and high-quality services.²³⁴ The *Consumer Information and Disclosure NOI*, however, focuses on a broad array of consumer issues that cut across all communications service offerings,²³⁵ while here we seek comment on the specific issue, not raised in that *NOI*, of how broadband Internet access service providers should disclose relevant network management practices to consumers as well as to content, application, and service providers and to government. As previously noted, recipients of BTOP and BIP grants are required to disclose network management practices on their websites.²³⁶ We propose a transparency principle to protect and empower consumers and to maximize the efficient operation of relevant markets by ensuring that all interested parties have access to necessary information about the traffic management practices of networks. At the same time, recognizing the potential burdens of such rules, we seek to design a transparency rule that is minimally intrusive. We seek comment below on how to balance these goals and reiterate our desire for comments that include data and specific examples.

119. We believe that adopting a rule requiring transparency would benefit several constituencies. First, disclosure rules would enable broadband subscribers to understand and take advantage of the technical capabilities and limitations of the services they purchase. Second, disclosure would benefit content, application, and service providers and investors by increasing access to information needed to develop and market new Internet offerings. Third, disclosure would benefit policy makers and the Internet users who rely on them by providing an empirical foundation for evaluating the effectiveness and necessity of ongoing policies. As such, we propose codifying a sixth principle of transparency as follows:

6. *Subject to reasonable network management, a provider of broadband Internet access service must disclose such information concerning network management and other practices as is reasonably required for users and content, application, and service providers to enjoy the protections specified in this part.*

We propose that, as with the previous five rules, this rule should be subject to reasonable network management and the needs of law enforcement, public safety, and homeland and national security, as discussed at greater length below.²³⁷

²³³ See LOUIS D. BRANDEIS, *OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT* 92 (1914).

²³⁴ *Consumer Information and Disclosure NOI*, 24 FCC Rcd at 11382, para. 5 & n.8; see also Powell, *Internet Freedom* at 5 (urging that consumers "should receive meaningful information regarding their service plans" from broadband Internet access service providers).

²³⁵ See *Consumer Information and Disclosure NOI*, 24 FCC Rcd at 11389–95, paras. 23–45 (seeking comment on the information that consumers need to choose a provider and service plan, manage that service plan, and decide when to switch to another plan or provider).

²³⁶ See *supra* para. 45.

²³⁷ See *infra* section IV.F.

120. We seek comment on the specific wording of this proposed rule. In particular, we seek comment on how we should interpret what information is “reasonably required” and whether there are some standard practices that should be excluded from such mandatory disclosure. We also seek comment on alternative proposed formulations of the rule, including whether the rule should require disclosure of information directly to the Commission.

121. *Disclosure to Users.* In the *Consumer Information and Disclosure NOI*, we sought comment on a broad range of issues related to disclosure to consumers. In this Notice, we seek comment more narrowly on the kind of required disclosures to users that would effectuate the Internet principles discussed herein. Specifically, we propose that broadband Internet access service providers should be required to disclose information to users concerning network management and other practices that may reasonably affect the ability of users to use the devices, send or receive the content, use the services, run the applications, and enjoy the competitive offerings of their choice.

122. Commenters to the *National Broadband Plan NOI* have generally agreed that disclosure of network management practices is important for users.²³⁸ A large number of commentators on open Internet principles in our *Broadband Industry Practices* proceeding—both those in favor of a nondiscrimination principle and those opposed—likewise believe that broadband Internet access service providers should be required to disclose more information about their network management practices than they currently disclose.²³⁹ Disclosure of this information would correct information asymmetries and allow users to make informed purchasing and usage decisions.

123. We have in the past found evidence of service providers concealing information that consumers would consider relevant in choosing a service provider or a particular service option. For example, in *Madison River* and *Comcast*, broadband Internet access service providers blocked specific applications desired by users without informing them. In a recent academic study, thousands of incidents were observed in which BitTorrent uploads were blocked in the United States during early 2008. Specifically, the study found that “BitTorrent uploads are being blocked for a significant number of hosts, mostly from ISPs in the USA and in Singapore.”²⁴⁰ At that time, the U.S. Internet service providers whose customers experienced the most blocking had not publicly disclosed their network and congestion management practices, nor had most other providers.²⁴¹ Of major broadband providers, only a handful appear to publicly disclose their network and congestion management practices.

124. After the Commission issued the *Comcast Network Management Practices Order*, some providers voluntarily disclosed congestion management practices on their websites.²⁴² Nevertheless, there

²³⁸ See, e.g., NATOA et al. June 6, 2009 Comments, GN Docket No. 09-51, at 12; A+L June 8, 2009 Comments, GN Docket No. 09-51, at 6; Free Press June 8, 2009 Comments, GN Docket No. 09-51, at 173–84; Public Knowledge et al. June 8, 2009 Comments, GN Docket No. 09-51, at 15–16; see also Verizon February 13, 2008 Comments, WC Docket 07-52, at 14–17; CTIA February 28, 2008 Reply, WC Docket 07-52, at 7–8.

²³⁹ See, e.g., CCA June 15, 2007 Comments, WC Docket No. 07-52, at 4; CDT June 15, 2007 Comments, WC Docket No. 07-52, at 13; Scott Moe June 15, 2007 Comments, WC Docket No. 07-52, at 1; ITIC June 15, 2007 Comments, WC Docket No. 07-52, at 2–3; TIA June 13, 2007 Comments, WC Docket No. 07-52, at 9.

²⁴⁰ Dischinger, *Detecting BitTorrent Blocking* at 1. The study contained results through July 25, 2008. Later research showed that the blocking of BitTorrent uploads tapered off through the end of 2008 and was largely absent at the beginning of 2009, after the *Comcast Network Management Practices Order* was issued. See http://broadband.mpi-sws.org/transparency/results/#evol_block (last visited Oct. 21, 2009).

²⁴¹ Dischinger, *Detecting BitTorrent Blocking* at 1.

²⁴² For example, a February 2009 announcement by Cox of a trial system that slows less time-sensitive traffic—“such as file uploads, peer-to-peer and Usenet newsgroups”—during periods of network congestion notes that “[o]ur past practices were based on traffic prioritization and protocol filtering,” but that “[t]he technology and policies at (continued . . .)

may be other instances of unreported application blocking or other practices that limit consumers' ability to access content, applications, or services of their choice on the Internet.²⁴³ In the absence of disclosure rules, we have no way of knowing the full extent of these practices. Nor do users.

125. We seek comment on what consumers need to know about network management practices to make informed purchasing decisions and to make informed use of the services they purchase. We believe that many consumers need information concerning actual (as opposed to advertised) transmission rates, capacity, and any network management practices that affect their quality of service.²⁴⁴ Commenters should address what types of network management practices could interfere with or restrict service and what types of disclosure would be appropriate. Should broadband Internet access service providers be required to disclose, for example, the times of day users are most likely to be affected by network congestion, or the steps providers might take to control or alleviate congestion? Disclosure of service information is vital to consumer choice both before and after a consumer decides to purchase a service. Thus, we seek comment on the types of information broadband Internet access service providers should be required to disclose to consumers before and after purchase.

126. We also seek comment on how this information should be disclosed to users. Are there standard labeling formats that could be used to disclose network management practices to users? Are there technological tools available now, or current tools that could be easily adapted, to facilitate consumer comparisons of network management practices? We seek examples of disclosure, both within and outside the communications market, that are both useful for consumers and not unnecessarily burdensome. We note that some current disclosure practices appear too general to be useful to users. On the other hand, too much detail may be counter-productive if users ignore or find it difficult to understand those details. We seek comment on the appropriate balance. Similarly, we seek comment on how disclosure can be tailored not to unduly burden broadband Internet access service providers. We propose that providers should be able to publicly disclose their practices on their websites and promotional material. Are there other consumer-friendly outlets for this information that broadband Internet access service providers can use without undue cost and effort?

127. *Disclosure to Content, Application, and Service Providers.* Content, application, and service providers should have adequate information about network management practices to enable them to innovate and provide their products and services effectively to users. By reducing uncertainty, transparency should increase the ability and incentives of these providers to invest and innovate and engage in research and development. We seek comment on what information is currently available, what additional information should be made available, and how this information should be made available to content, application, and service providers. Are there current examples of disclosure to upstream entities by broadband Internet access service providers that could serve as a useful model for any disclosure requirements? Would the comparably efficient interconnection (CEI) and open network architecture (ONA) rules the Commission adopted in *Computer III*²⁴⁵ provide a useful guide in developing disclosure requirements in this context? Should broadband Internet access service providers make such disclosures available on their websites? Are there particular formats that would make the disclosures more accessible

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work in this trial . . . factor in the guidance provided by the Federal Communications Commission." Cox, Congestion Management FAQs, <http://www.cox.com/policy/congestionmanagement/> (last visited Oct. 21, 2009).

²⁴³ Dischinger, *Detecting BitTorrent Blocking* at 1 ("Recently it has been reported that certain access ISPs are surreptitiously blocking their customers from uploading data using the popular BitTorrent file-sharing protocol.").

²⁴⁴ See NATOA et al. June 6, 2009 Comments, GN Docket No. 09-51, at 12; Free Press June 8, 2009 Comments, GN Docket No. 09-51, at 183.

²⁴⁵ See *Wireline Broadband Order*, 20 FCC Rcd at 14869-71, paras. 27-28 (describing the CEI and ONA requirements).

and useful for content, application, and service providers? We also seek comment on how such required disclosures can be tailored not to unduly burden broadband Internet access service providers.

128. *Disclosure to Government.* The Commission should have access to the information it needs to enforce any rules adopted in this proceeding and to make informed policy decisions going forward. We seek comment on the frequency and content of any reports from broadband Internet access service providers that would make open Internet policies enforceable and/or provide a useful tool for policy making. Specifically, what should broadband Internet access service providers be required to disclose to the Commission, if anything? Network management practices disclosed to consumers both before and after they purchase broadband Internet access service? A list of the methods of disclosure? Should providers report the number and content of any consumer complaints about the adequacy of disclosure both pre- and post-sale? Should broadband Internet access service providers also report the same information for complaints filed by content, application, and service providers? How frequently should the Commission require such reports? Are there governmental agencies, other than this Commission, to which disclosures should be made, and if so, what information should be disclosed?

129. *General Issues.* We seek comment on what events should trigger disclosure obligations, how these disclosures should be made and in what format, how often they should be made, and whether the disclosures should be uniform or tailored to specific purposes and audiences. Should broadband Internet access service providers be required to disclose any changes to their network management practices before or within a certain period of time after implementing those changes? Would current or past disclosure practices serve as good models for disclosure to consumers; content, application, and service providers; and the Commission?

130. We do not anticipate that any disclosures required by the proposed transparency rule would implicate personally identifiable information or individuals' privacy interests or any proprietary network data. However, we seek comment on whether this assumption is correct. We further seek comment on any network security, online safety, and competition concerns that might be raised by the proposed transparency rule. If such concerns exist, how can we best address them in our rules? Should certain information be disclosed only to the Commission and not to the public, upon a showing of good cause that public disclosure would cause significant harms? We note that parties in other proceedings have raised public safety and competitive harm concerns about such reports. We also propose that any routine reports should not affect our ability or the ability of other government entities to gather any network management information necessary to comply with or enforce the law.

131. We also seek comment on general arguments against disclosure requirements. Specifically, is network management information genuinely of use to users and/or content, application, and service providers? Would disclosure slow innovation in the network or slow or deter research in efficient network design? We also seek comment on whether transparency will encourage or enable users and/or content, application, and service providers to circumvent legitimate network management tools designed, for example, to manage congestion.

132. Finally, we seek comment on legal limitations on the type of information broadband Internet access service providers may disclose. For example, we note there are several laws that prohibit disclosure by a broadband Internet access service provider to the end user of the provider's compliance with certain requests of law enforcement authorities.²⁴⁶ We seek comment on whether the proposed exception to the rules for the needs of law enforcement, discussed below, adequately addresses this issue.

²⁴⁶ See, e.g., 50 U.S.C. § 1804 (from the Electronic Communications Privacy Act); 18 U.S.C. § 2518 (from the Federal Intelligence Surveillance Act).

F. Reasonable Network Management, Law Enforcement, Public Safety, and Homeland and National Security

133. As stated above, our goals in this proceeding are to encourage investment and innovation, promote competition, and protect the rights of users, including promoting speech and democratic participation.²⁴⁷ While the six rules proposed above are derived from and designed to support these goals, there may be times when strict application of those rules would be in tension with these goals. For example, the general usefulness of the Internet could suffer if spam floods the inboxes of users, if viruses affect their computers, or if network congestion impairs their access to the Internet. Other critical governmental interests such as law enforcement,²⁴⁸ national security, and public safety may require that Internet access service providers discriminate with regard to particular traffic. For example, a failure to prioritize certain types of traffic in the case of an emergency could impair the efforts of first responders.²⁴⁹ Consequently, we must ensure that our framework provides a way to balance potentially competing interests while helping to ensure an open, safe, and secure Internet. We propose that all six proposed rules should be subject to (1) reasonable network management, (2) the needs of law enforcement,²⁵⁰ and (3) the needs of public safety and homeland and national security.

134. As with the six proposed rules, we propose to describe these concepts at a relatively general level and leave more detailed rulings to the adjudications of particular cases, as we did in the *Comcast Network Management Practices Order*.²⁵¹ As in that order, the novelty of Internet access and traffic management questions, the complex nature of the Internet, and a general policy of restraint in setting policy for Internet access service providers weigh in favor of a case-by-case approach. We contemplate that individual adjudications will principally involve resolution of complaints about broadband Internet access service providers' specific practices. Providers would not be required to seek a declaratory ruling from the Commission before a practice is actually deployed, but they or others would be free to do so.²⁵² Accordingly, we propose to lay out a few examples of proper and improper application of the concepts here but to reserve definition of the precise contours of these concepts for future adjudications. This course should allow us to proceed cautiously with respect to these emerging issues and to do so with sensitivity to the fast-changing nature of the Internet and its continued growth. We discuss each of these concepts in turn.

²⁴⁷ See *supra* section IV.A.1.

²⁴⁸ Cf., e.g., 47 U.S.C. §§ 230(b)(5) ("It is the policy of the United States . . . to ensure vigorous enforcement of Federal criminal laws to deter and punish trafficking in obscenity, stalking, and harassment by means of computer."), 1002(a) ("[A] telecommunications carrier shall ensure that its equipment, facilities, or services that provide a customer or subscriber with the ability to originate, terminate, or direct communications are capable of," among other things, "delivering intercepted communications and call-identifying information to the government . . .").

²⁴⁹ Cf. 47 U.S.C. § 151 (instituting the Federal Communications Commission for, among other things, "the purpose of promoting safety of life and property through the use of wire and radio communication").

²⁵⁰ The original second Internet principle, rather than all four, was subject to the needs of law enforcement. We believe it would be preferable to make clear that all principles are subject to the needs of law enforcement, as well as those of public safety and homeland and national security, and seek comment on that proposal.

²⁵¹ See 23 FCC Rcd at 13045-46, paras. 29-32.

²⁵² See 47 C.F.R. § 1.2 (providing for "a declaratory ruling terminating a controversy or removing uncertainty").

1. Reasonable Network Management

135. Here we discuss the proposed definition of reasonable network management:

Reasonable network management consists of: (a) reasonable practices employed by a provider of broadband Internet access service to (i) reduce or mitigate the effects of congestion on its network or to address quality-of-service concerns; (ii) address traffic that is unwanted by users or harmful; (iii) prevent the transfer of unlawful content; or (iv) prevent the unlawful transfer of content; and (b) other reasonable network management practices.

136. There appear to be several types of situations that could justify a broadband Internet access service provider's acting inconsistently with the six open Internet principles described above. First, if a broadband Internet access service provider's network is or appears likely to become congested to such a degree that an individual user's Internet access is noticeably affected, the broadband Internet access service provider may be justified in taking reasonable steps to reduce or mitigate the adverse effects of that congestion or to address quality-of-service concerns. Second, it may be reasonable for a provider to take measures to counter traffic that is harmful or unwanted by users. Third, if particular content or a particular transfer of content is prohibited by law, the provider may be justified in not carrying that traffic. Finally, there may be other situations in which network management practices do not fall into one of these categories but may nevertheless be reasonable. We address each of these categories in turn.

137. First, we propose that a broadband Internet access service provider may take reasonable steps to reduce or mitigate the adverse effects of congestion on its network or to address quality-of-service concerns. What constitutes congestion, and what measures are reasonable to address it, may vary depending on the technology platform for a particular broadband Internet access service. For example, if cable Internet subscribers in a particular neighborhood are experiencing congestion, it may be reasonable for an Internet service provider to temporarily limit the bandwidth available to individual users in that neighborhood who are using a substantially disproportionate amount of bandwidth until the period of congestion has passed. Alternatively, a broadband Internet service provider might seek to manage congestion by limiting usage or charging subscribers based on their usage rather than a flat monthly fee. Some have suggested it would be beneficial for a broadband provider to protect the quality of service for those applications for which quality of service is important by implementing a network management practice of prioritizing classes of latency-sensitive traffic over classes of latency-insensitive traffic (such as prioritizing all VoIP, gaming, and streaming media traffic).²⁵³ Others have suggested that such a practice would be difficult to implement in a competitively fair manner and could undermine the benefits of a nondiscrimination rule, including keeping barriers to innovation low. We seek comment on whether these and other potential approaches to addressing congestion would be reasonable. On the other hand, we believe that it would likely not be reasonable network management to block or degrade VoIP traffic but not other services that similarly affect bandwidth usage and have similar quality-of-service requirements.²⁵⁴ Nor would we consider the singling out of any particular content (*i.e.*, viewpoint) for blocking or deprioritization to be reasonable, in the absence of evidence that such traffic or content was

²⁵³ Here we discuss protecting quality of service only for purposes of managing a network, not for purposes of offering a managed or specialized service; such potential offerings are discussed in section IV.G below.

²⁵⁴ *Cf.* 47 U.S.C. § 230(b)(2) ("It is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services . . ."); *Madison River*, 20 FCC Rcd 4295.

harmful.²⁵⁵ We recognize that in a past adjudication, the Commission proposed that for a network management practice to be considered “reasonable,” it “should further a critically important interest and be narrowly or carefully tailored to serve that interest.”²⁵⁶ We believe that this standard is unnecessarily restrictive in the context of a rule that generally prohibits discrimination subject to a flexible category of reasonable network management. We seek comment on our proposal not to adopt the standard articulated in the *Comcast Network Management Practices Order* in this rulemaking.

138. Second, we propose that broadband Internet access service providers may address harmful traffic or traffic unwanted by users as a reasonable network management practice. For example, blocking spam appears to be a reasonable network management practice, as does blocking malware or malicious traffic originating from malware, as well as any traffic that a particular user has requested be blocked (e.g., blocking pornography for a particular user who has asked the broadband Internet access service provider to do so).²⁵⁷

139. Third, we propose that broadband Internet access service providers would not violate the principles in taking reasonable steps to address unlawful conduct on the Internet. Specifically, we propose that broadband Internet access service providers may reasonably prevent the transfer of content that is unlawful. For example, as the possession of child pornography is unlawful,²⁵⁸ consistent with applicable law, it appears reasonable for a broadband Internet access service provider to refuse to transmit child pornography. Moreover, it is important to emphasize that open Internet principles apply only to lawful transfers of content. They do not, for example, apply to activities such as the unlawful distribution of copyrighted works, which has adverse consequences on the economy and the overall broadband ecosystem. In order for network openness obligations and appropriate enforcement of copyright laws to co-exist, it appears reasonable for a broadband Internet access service provider to refuse to transmit copyrighted material if the transfer of that material would violate applicable laws.²⁵⁹ Such a rule would be consistent with the *Comcast Network Management Practices Order*, in which the Commission stated that “providers, consistent with federal policy, may block . . . transmissions that violate copyright law.”²⁶⁰

140. Finally, we propose that broadband Internet access service providers may take other reasonable steps to maintain the proper functioning of their networks. We include this catch-all for two reasons. First, we do not presume to know now everything that providers may need to do to provide robust, safe, and secure Internet access to their subscribers, much less everything they may need to do as technologies and usage patterns change in the future. Second, we believe that additional flexibility to engage in reasonable network management provides network operators with an important tool to experiment and innovate as user needs change.

141. We seek comment on the specific wording of the proposed definition of reasonable network management. We seek comment on how to evaluate whether particular network management practices fall into one or more of these categories and on who should bear the burden of proof on that issue. We ask parties to identify other laws that would require or permit broadband Internet access

²⁵⁵ Cf. 47 U.S.C. § 230(b)(3) (“It is the policy of the United States . . . to encourage the development of technologies which maximize user control over what information is received by [those] who use the Internet and other interactive computer services . . .”).

²⁵⁶ *Comcast Network Management Practices Order*, 23 FCC Rcd at 13055–56, para. 47.

²⁵⁷ *See id.*

²⁵⁸ *See* 18 U.S.C. § 2252.

²⁵⁹ *See* 17 U.S.C. § 506 (criminalizing the willful infringement of a copyright in certain circumstances).

²⁶⁰ *See Comcast Network Management Practices Order*, 23 FCC Rcd at 13058, para. 50; 47 U.S.C. § 230(e)(2) (“Nothing in this section shall be construed to limit or expand any law pertaining to intellectual property.”).

service providers to act in a manner inconsistent with the six rules. We seek comment on whether certain network management techniques are considered best practices in the network engineering community or are consistent with industry standards and cooperative agreements. We note that in section IV.H we seek comment on how to consider reasonable network management practices in the context of broadband Internet access over mobile wireless networks. We also note that standards bodies such as the Internet Engineering Task Force (IETF) have played a significant role in developing network management protocols,²⁶¹ and we seek comment on whether the IETF, other standards bodies, or other third parties could help define more precisely what practices are reasonable or, specifically in the context of copyright protection, how it could be determined whether the transfer of particular content is unlawful. We ask that parties support their comments with data and specific examples where possible.

2. Law Enforcement

142. Federal law has long recognized the importance of permitting law enforcement access to communications networks in certain circumstances. The Communications Assistance for Law Enforcement Act, for example, requires broadband Internet access service providers to assist law enforcement in intercepting, tracking, and identifying communications made over their networks.²⁶² The Foreign Intelligence Surveillance Act authorizes law enforcement collecting foreign intelligence or working to thwart a threat to national security to wiretap communications over the Internet and prohibits an Internet access service provider from disclosing the existence of the wiretap to its subscriber.²⁶³ And the Electronic Communications Privacy Act creates a framework for law enforcement to work with Internet access service providers and others for the purpose of investigating and monitoring information stored on or transiting the Internet while balancing the privacy interests of affected parties.²⁶⁴ We believe that a broadband Internet access service provider may comply with these laws and otherwise meet the needs of law enforcement without violating the rules we propose today. For example, we do not believe that nondisclosure of a wiretap to a surveillance target would violate a carrier's transparency obligations as proposed here.

143. Accordingly, we propose the following new rule:

Nothing in this part supersedes any obligation a provider of broadband Internet access service may have—or limits its ability—to address the needs of law enforcement, consistent with applicable law.

144. We seek comment on our conclusions and on the specific wording of this proposed rule. We also seek comment on instances in which broadband Internet access service providers have or may in the future need to facilitate the needs of law enforcement, including in ways that, in the absence of the exception proposed in this section, might conflict with the rules we propose today. In particular, we seek specific examples and data regarding these issues.

3. Public Safety and Homeland and National Security

145. In connection with a local, regional, or national emergency, federal, state, tribal, and local public safety entities; homeland security personnel; and other appropriate governmental agencies may

²⁶¹ For example, Simple Network Management Protocol (SNMP) is a Management Information Base (MIB) protocol developed by the IETF for the purpose of network node management. See Jeffrey Case, et al., *A Simple Network Management Protocol (SNMP)*, IETF RFC 1157, at 2–5 (May 1990), <http://tools.ietf.org/rfc/rfc1157.txt>.

²⁶² See 47 U.S.C. § 1002(a).

²⁶³ See 50 U.S.C. §§ 1802(a)(4), 1804, 1805(c)(2).

²⁶⁴ See 18 U.S.C. §§ 2518, 2705.