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Federal Communications Commission
Washington, D.C. 20554

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

NOTICE OF PROPOSED RULEMAKING

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I. INTRODUCTION

1. Forty years ago, the first packet switches linked computers into a network, laying the foundation for the Internet, which has transformed our nation’s economy, culture, and democracy. The Internet has been a launching pad for innumerable creative and entrepreneurial ventures; enabled businesses small and large, wherever located, to reach customers around the globe; allowed individuals in remote parts of America to access information and services previously unavailable to them; and made it possible for the voice of a single citizen—whether in the form of a blog post, online video, or tweet—to influence world events. As recently as twenty years ago, it would have been difficult to imagine the profound benefits the Internet routinely provides today.

2. With today’s Notice, we seek public input on draft rules to preserve an open Internet—the next step in an ongoing and longstanding effort at the Commission. As described in greater detail below, the Commission has considered the issue of Internet openness in a wide variety of contexts and proceedings, including: a unanimous policy statement, a notice of inquiry on broadband industry practices, public comment on several petitions for rulemaking, conditions associated with significant communications industry mergers, the rules for a major spectrum auction, and specific enforcement actions against particular parties. In examining this issue, the Commission has provided abundant opportunities for public participation, including through public hearings and requests for written comment, which have generated over 100,000 pages of input in approximately 40,000 filings from interested companies, organizations, and individuals.

3. Throughout this extensive process, one point has attracted nearly unanimous support: The Internet’s openness, and the transparency of its protocols, have been critical to its success. Because the Internet’s creators did not know—and did not want to pre-determine—what would emerge and succeed on the network, they chose an architecture that did not favor particular applications. The network’s architecture was based on a set of non-proprietary standards. It was open to any computer or information processor configured to use the standard protocols, and to any content addressed in accordance with the protocols.

4. Because of the historically open architecture of the Internet, it has been equally accessible to anyone with a basic knowledge of its protocols. As a platform for commerce, it does not distinguish between a budding entrepreneur in a dorm room and a Fortune 500 company. As a platform for speech, it offers the same potential audience to a blogger on her couch and to a major newspaper columnist. The Internet’s accessibility has empowered individuals and companies at the edge of the network to develop and contribute an immense variety of content, applications, and services that have improved the lives of Americans. Such innovation has dramatically increased the value of the network, spurring—in a virtuous

circle—investment by network operators, who have improved the Internet’s reach and its performance in many areas.

5. This Commission has a statutory responsibility to preserve and promote advanced communications networks that are accessible to all Americans and that serve national purposes.¹ Four years ago, the Commission sought to safeguard and promote the open Internet by announcing four general Internet policy principles that would guide its interpretation of the Communications Act of 1934, as amended (the Act):²

- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to access the lawful Internet content of their choice.
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to connect their choice of legal devices that do not harm the network.³
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to competition among network providers, application and service providers, and content providers.⁴

The Commission noted that all the principles “are subject to reasonable network management.”⁵

6. The *Internet Policy Statement* has helped preserve the openness of the Internet over the past four years, but the time has now come to build on past efforts and to provide greater clarity regarding the Commission’s approach to these issues through a notice-and-comment rulemaking. This rulemaking process is intended to provide greater predictability as well as to help address emerging challenges to the open Internet.

¹ See 47 U.S.C. § 254(b)(2) (“Access to advanced telecommunications and information services should be provided in all regions of the Nation.”); Telecommunications Act of 1996, Pub. L. No. 104-104, § 706, 110 Stat. 56, 153 (1996), *codified as amended at* 47 U.S.C. § 1302; 47 U.S.C. § 230; *see also* 47 U.S.C. § 1305(k)(2) (“The national broadband plan required by this section shall seek to ensure that all people of the United States have access to broadband capability . . .”).

² *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14986, 14987–88, para. 4 (2005) (*Internet Policy Statement*).

³ *See id.* at 14988, para. 4 & n.13 (emphasis in original) (citing *Hush-A-Phone Corp. v. United States*, 238 F.2d 266, 269 (D.C. Cir. 1956); *Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d 420 (1968)).

⁴ *See id.* at 14988, para. 4 & n.14 (emphasis in original) (citing Preamble, Telecommunications Act of 1996, P.L. 104-104, 100 Stat. 56 (1996) (enacting 1996 Act “to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies”)).

⁵ *Id.* at 14988 n.15.

7. In many parts of the United States, customers have limited options for high-speed broadband Internet access service. Moreover, broadband providers generally sell other services—such as voice and video—that face competition from content and applications offered by others over the Internet. As a result, broadband providers’ interests in maximizing profits may not always align with the interests of end users and the public.

8. In addition, the volume of Internet traffic is increasing rapidly, leading broadband providers to try new ways of managing congestion on their networks. Tools that enable network operators to prioritize or degrade transmissions of particular content, applications, and services are increasingly available and widely deployed—and the use of these tools raises important policy questions. As discussed in greater detail below, broadband Internet access service providers may have both the incentive and the means to discriminate in favor of or against certain Internet traffic and to alter the operation of their networks in ways that negatively affect consumers, as well as innovators trying to develop Internet-based content, applications, and services. Such practices have the potential to change the Internet from an open platform that enables widespread innovation and entrepreneurship to an increasingly closed system with higher barriers to participation and reduced user choice and competition.

9. At the same time, we recognize the importance of preserving and protecting broadband providers’ flexibility to manage their networks in a way that benefits consumers and will further the safety, security, and accessibility of the Internet. We also recognize the importance—discussed in greater detail in the managed or specialized services section⁶—of preserving and protecting the ability of broadband providers to experiment with technologies and business models to help drive deployment of open, robust, and profitable broadband networks across the nation. Broadband providers’ ability to innovate and develop valuable new services must co-exist with the preservation of the free and open Internet that consumers and businesses of all sizes have come to depend on.

10. In this Notice, we seek to build upon the existing record at the Commission to identify the best means to achieve our goal of preserving and promoting the open Internet. We seek to do so in a manner that will protect the legitimate needs of consumers, broadband service providers, entrepreneurs, investors, and businesses of all sizes that make use of the Internet.

11. To guide this process, we offer draft rules, including a codification of the existing Internet policy principles, additional principles of nondiscrimination and transparency, an acknowledgement that these principles apply to all forms of broadband Internet access, and a discussion of “managed” or “specialized” services. The nondiscrimination principle would prohibit broadband Internet access service providers from favoring or disfavoring lawful content, applications, or services accessed by their subscribers, but would allow broadband providers to engage in reasonable network management. The transparency principle would require providers of broadband Internet access service to make available relevant information regarding network management practices to the consumers who purchase their service; to content, application, and service providers, who must ensure that their offerings function on the Internet; and to the Commission. All of the principles would be subject to reasonable network management and the needs of law enforcement, public safety, and homeland and national security. We also acknowledge that broadband Internet access service providers have flexibility to develop and deploy new technologies and business models, including by offering managed or specialized services that are distinct from traditional broadband Internet access service. We seek detailed comment below on this framework, the two additional proposed principles, as well as the scope of the exceptions to the principles.

12. In addition, we recognize that Internet and computer technologies, as well as associated market structures, are in constant flux. Accordingly, we seek comment on a case-by-case approach to

⁶ See *infra* section IV.G.

adjudicating violations of the principles. Under such an approach, we would evaluate the facts of particular cases against the principles codified in a general form, rather than crafting detailed rules.

13. We also affirm that the principles we propose to codify today should apply to all platforms for broadband Internet access, including mobile wireless broadband, while recognizing that different access platforms involve significantly different technologies, market structures, patterns of consumer usage, and regulatory history. These differences may require differences in how, to what extent, and when the principles apply—and we seek comment on each of these points and how they can be resolved in a manner that will further innovation, investment, research and development, competition, and the interests of consumers.

14. The rules we propose today address users' ability to *access* the Internet and are not intended to regulate the Internet itself or create a different Internet experience from the one that users have come to expect. Instead, our proposals attempt to build on existing policies (discussed below) that have contributed to the Internet's openness without imposing conditions that might diminish innovation or network investment. We seek to create a balanced framework that gives consumers and providers of Internet access, content, services, and applications the predictability and clarity they need going forward while retaining our ability to respond flexibly to new challenges.

15. These proposals aim to maximize the Internet's potential to further users' interests and the public interest—including national priorities such as education, health care, and energy efficiency—by safeguarding the essential openness that has been a hallmark of the Internet since its inception, and by assuring transparency in the Internet's operations. At the same time, the proposed rules will enable broadband providers to reasonably manage their networks and will help ensure a safe and secure Internet where unwanted traffic such as computer viruses and spam is limited. We seek comment below on our rationales for the proposals, as well as on the proposals' particular form.

II. EXECUTIVE SUMMARY

16. In this Notice of Proposed Rulemaking, we seek comment on the best means of preserving a free and open Internet, however it is accessed, and draft proposals to achieve that end. We are particularly interested in fact-based answers to the questions we pose and strongly encourage commenters to provide relevant data and analyses in support of their positions. Specifically, we seek comment on the following:

- We propose draft language to codify the four principles the Commission articulated in the *Internet Policy Statement*.
- We propose draft language to codify a fifth principle that would require a broadband Internet access service provider to treat lawful content, applications, and services in a nondiscriminatory manner.
- We propose draft language to codify a sixth principle that would require a broadband Internet access service provider to 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 rulemaking.
- We propose draft language to make clear that the principles would be subject to reasonable network management and would not supersede any obligation a broadband Internet access service provider may have—or limit its ability—to deliver emergency communications or to address the needs of law enforcement, public safety, or national or homeland security authorities, consistent with applicable law. The draft rules would not prohibit broadband Internet access service providers from taking reasonable action to prevent the transfer of unlawful content, such as the unlawful distribution of copyrighted works. Nor would the

draft rules be intended to prevent a provider of broadband Internet access service from complying with other laws.

- We seek comment on a category of “managed” or “specialized” services, how to define such services, and what principles or rules, if any, should apply to them.
- We affirm that the six principles we propose to codify apply to all platforms for broadband Internet access. We seek comment on how, in what time frames or phases, and to what extent the principles should apply to non-wireline forms of Internet access, including, but not limited to, terrestrial mobile wireless, unlicensed wireless, licensed fixed wireless, and satellite.
- Finally, we seek comment on the enforcement procedures that the Commission should use to ensure compliance with the principles we propose today.

III. BACKGROUND

A. The Open and Transparent Internet

17. Today’s Internet embodies a legacy of openness and transparency that has been critical to the network’s success as an engine for creativity, innovation, and economic growth. Imagine an entrepreneur who wants to launch a new website or online service. She faces low barriers to entering the market, in part because broadband Internet access service providers today will not charge her for the right to reach specific users, beyond the fee for connecting to the Internet. In addition, she is able to build on a number of technological innovations and practices that have already been incorporated into the Internet, including the user-friendly browser software used to display webpages, the computer languages used to encode the format of webpages (e.g., the HyperText Markup Language, or HTML), the communication protocols used to retrieve those pages from computers elsewhere on the Internet (e.g., the HyperText Transfer Protocol, or HTTP), and the basic communication protocols used to link computers and other communicating devices together through a network of networks that today reaches more than 1.6 billion people worldwide (e.g., the Transmission Control Protocol and Internet Protocol, or TCP/IP).

18. These prior innovations are free and open for any entrepreneur to use: They do not require the securing of permission or the payment of royalties. TCP/IP was developed and made available in the public domain under research programs funded by the U.S. government in the 1970s.⁷ Building on TCP/IP, the concept and protocols of the World Wide Web were developed in the late 1980s by Tim Berners-Lee at a European high-energy physics research facility and are similarly open and accessible for use by others.⁸ A college student, Marc Andreessen, built on the Web concept in the mid-1990s to develop the first graphically oriented (point-and-click) Web browser, Mosaic, which he later commercialized as Netscape.⁹

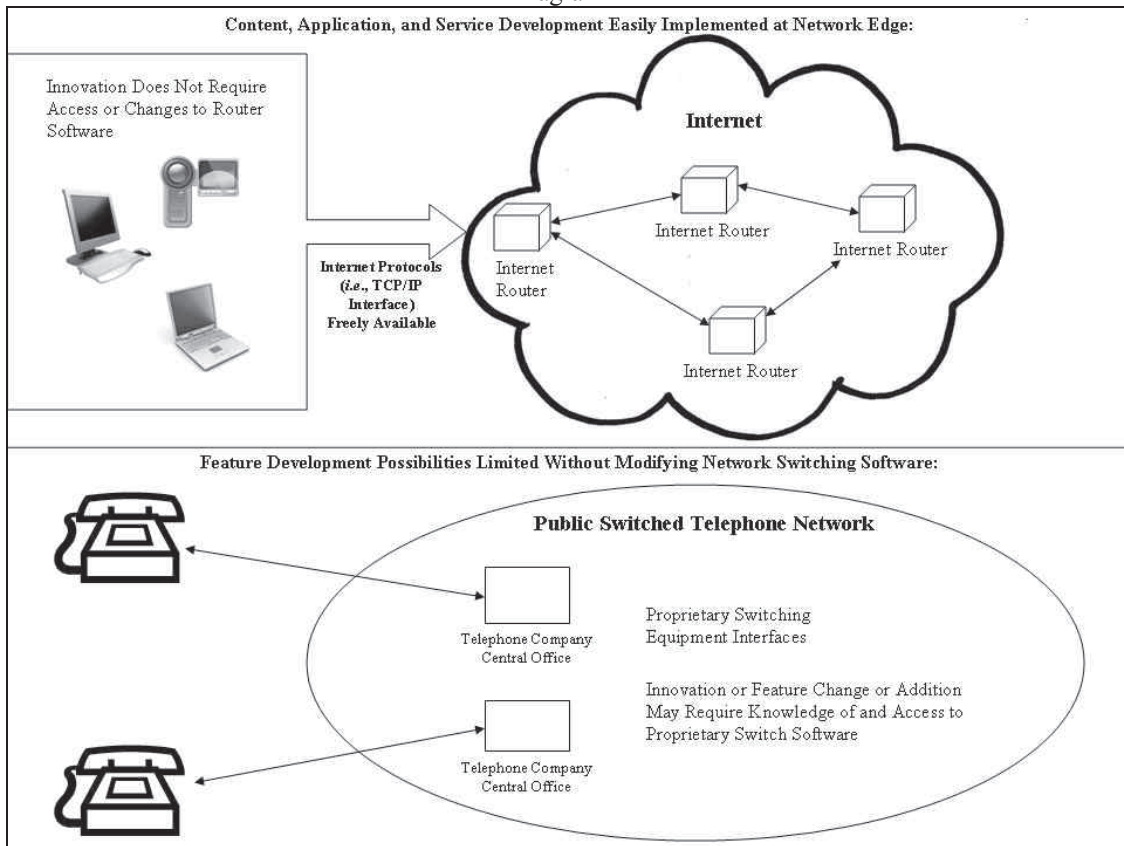
⁷ See Barry M. Leiner et al., *A Brief History of the Internet*, The Internet Society, available at <http://www.isoc.org/internet/history/brief.shtml> (last visited Oct. 21, 2009); Vinton G. Cerf & Robert E. Kahn, *A Protocol for Packet Network Interconnection*, IEEE Transactions of Communications Technology (1974), available at <http://www.cs.princeton.edu/courses/archive/fall06/cos561/papers/cerf74.pdf>.

⁸ Cheryl Gribble, *History of the Web Beginning at CERN*, http://www.hitmill.com/internet/web_history.html (last visited Oct. 21, 2009) (Gribble, *History of the Web*). CERN’s network administrators had found it easy to adopt TCP/IP because of its openness and transparency. See Ben Segal, *A Short History of Internet Protocols at CERN*, at 3 (Apr. 1995), <http://ben.home.cern.ch/ben/TCPHIST.html>.

⁹ Gribble, *History of the Web*, at 2. This ability of content, application, and service providers to build upon other content, applications, and services that are available through the Internet creates what has been called a “generative effect.” See Jonathan L. Zittrain, *The Generative Internet*, 119 HARV. L. REV. 1974, 1980 (2006).

19. Another more technical aspect of Internet openness has had the effect of empowering entrepreneurs to innovate without needing to seek permission. TCP/IP reflects a so-called “end-to-end” system design, in which the routers in the middle of the network are not optimized toward the handling of any particular application, while network endpoints (the user’s computer or other communicating device) are expected to perform the functions necessary to support specific networked applications.¹⁰ The practical implication of this design philosophy has been that a software developer can develop new networked applications by writing programs only for end-user computers, without needing to modify the far more specialized programs running on network routing equipment. As the diagram below illustrates, this design differs from how the Public Switched Telephone Network has historically operated. By allowing innovation to be easily implemented at the edge of the network, the end-to-end design of the Internet has lowered technical, financial, and administrative barriers to entry for entrepreneurs with technical skill and bright ideas.

Diagram 1



¹⁰ See Ed Krol & Ellen Hoffman, *FYI on “What is the Internet?”*, IETF RFC 1462, at 3 (May 1993), <http://www.ietf.org/rfc/rfc1462.txt> (“To send a message on a [TCP/IP] network, a computer only had to put its data into an envelope, called an Internet Protocol (IP) packet, and ‘address’ the packets correctly. The communicating computers—not the network itself—were also given the responsibility to ensure that the communication was accomplished. The philosophy was that every computer on the network could talk, as a peer, with any other computer.”); Jerome Saltzer et al., *End-to-End Arguments in System Design*, 2 ACM TRANSACTIONS ON COMPUTER SYS. 277 (1984).

20. The open Internet has had a transformative effect on commerce. More than 600,000 Americans now earn part of their living by operating small businesses on eBay's auction platform, bringing jobs and opportunity to communities throughout the nation.¹¹ Yahoo!, founded by graduate students in 1994, created a new paradigm for web portals and employs more than 13,000 people.¹² Firms as large as Amazon.com and as small as Black Dinah Chocolatiers have made online shopping an everyday reality, creating more convenience for customers and more opportunities for merchants in remote locations.¹³

21. The Internet's openness has also created transformational commercial opportunities for network operators. Because TCP/IP is just as accessible to telephone, cable, and wireless network operators as it is to innovators and entrepreneurs at the edge of the network, these infrastructure companies have been able to adopt Internet technologies and invest to develop the \$130 billion annual business that broadband Internet access has become today.¹⁴

22. The open Internet is beginning to transform our health care, education, and energy usage. Sixty-one percent of American adults have searched for health information online, and of those, sixty percent say the online information affected a decision about treating an illness or condition.¹⁵ Students use the Internet to gain access to specialized teachers and educational materials that would otherwise be unreachable. Innovative companies rely on the Internet to enable car sharing, a practice that takes cars off the road and decreases gasoline usage.¹⁶

23. The open Internet has also provided an unprecedented platform for speech, democratic engagement, and cultural development. When the ARPANET began to operate in 1969, instances of citizen journalists focusing international attention on an issue or situation were relatively rare; today blogs and tweets from individual Internet users influence the course of world events. Politicians turn to the Internet to learn their constituents' views and explain their positions. The Internet provides almost instant access to a vast reservoir of human knowledge, and it enables participants to collaborate on organizing that knowledge so it can be even more accessible.¹⁷ Indeed, the Commission has used the Internet to receive and disseminate public comments for more than ten years, and we are using the Internet in a variety of ways to facilitate participation in this rulemaking.¹⁸

¹¹ See, e.g., Jessica Seid, *Secrets to Becoming an eBay Millionaire*, CNNMoney.com (Aug. 5, 2006), http://money.cnn.com/2006/08/04/smbusiness/ebay_entrepreneur/.

¹² See LinkedIn, Yahoo! Company Page, <http://www.linkedin.com/companies/yahoo> (last visited Oct. 21, 2009).

¹³ See Amazon.com, Amazon.com: Online Shopping for Electronics, Apparel, Computers, Books, DVDs & More, <http://www.amazon.com> (last visited Oct. 21, 2009); Black Dinah Chocolatiers, Welcome, <http://www.blackdinahchocolatiers.com> (last visited Oct. 21, 2009) (website of a gourmet chocolate business run from an island off the coast of Maine).

¹⁴ See BEN PIPER, STRATEGY ANALYTICS, GLOBAL BROADBAND FORECAST 2008–2012 (May 2008), available at <http://www.strategyanalytics.com/default.aspx?mod=ReportAbstractViewer&a0=3978>.

¹⁵ See SUSANNAH FOX & SYDNEY JONES, PEW INTERNET & AMERICAN LIFE PROJECT, THE SOCIAL LIFE OF HEALTH INFORMATION 2 (2009), available at http://www.pewinternet.org/~media/Files/Reports/2009/PIP_Health_2009.pdf.

¹⁶ See, e.g., Green Benefits, See why car sharing is sustainable—Zipcar, available at <http://www.zipcar.com/is-it/greenbenefits> (last visited Oct. 21, 2009).

¹⁷ See Wikipedia, Wikipedia: About, <http://en.wikipedia.org/wiki/Wikipedia:About> (last visited Oct. 21, 2009).

¹⁸ See, e.g., Federal Communications Commission, OpenInternet.gov, <http://www.openinternet.gov> (last visited Oct. 21, 2009).

B. Historical Commission Policies

24. The intersection of communications and computing technology has tested the Commission for decades, requiring it to balance protections for expected network uses with safeguarding the potential for unexpected ones.¹⁹ Several regulatory proceedings have led us to where we are today, as we discuss below.

25. The first step was requiring openness at the edge of the wireline network.²⁰ In the era of monopoly-provided telephone service, a telephone was merely one component of that service.²¹ A phone company technician would bring telephones to a subscriber's home and hard wire them to the telephone network when the subscriber moved in, returning to remove the telephones when the subscriber moved out. Terms of service prohibited subscribers from attaching any non-phone company devices to phone lines.²² Ostensibly, these provisions protected the integrity and service quality of the telephone network,²³ but in effect they stymied competition and innovation in the customer premises equipment (CPE) market. The Commission's *Carterfone* line of decisions, however, changed that by requiring the phone company to allow subscribers to attach their choice of devices to the network.²⁴ Wrestling control of the network endpoints from the network owner fostered unforeseen advances in technology and network applications. The *Carterfone* standards enabled numerous innovations in customer premises equipment, including the answering machine, fax machine, modem, and even the standard RJ-11 phone jack,²⁵ and contributed to technical and conceptual developments that set the stage for the Internet.²⁶

¹⁹ See Jason Oxman, *The Commission and the Unregulation of the Internet*, Office of Plans and Policy Working Paper Series, No. 31 (1999), available at http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp31.pdf; Kevin Werbach, *Digital Tornado: The Internet and Telecommunications Policy*, Office of Plans and Policy Working Paper Series No. 29 (1997), available at http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp29.pdf.

²⁰ As this Notice recognizes, there are key distinctions between wireline and wireless technologies that have affected how they have been historically regulated. See *infra* section IV.H.

²¹ PETER W. HUBER ET AL., FEDERAL TELECOMMUNICATIONS LAW 665 (2nd ed. 1999).

²² *Jordaphone Corp. of America v. AT&T; Use of Telephone Answering Device in Connection with Interstate and Foreign Telephone Service*, Docket Nos. 9383, 9701, Decision, 18 FCC 644, 647 (1954); see also *Use of Recording Devices in Connection with Telephone Services*, Docket No. 6787, Report of the Commission, 11 FCC 1033, 1041 (1947) (*Attached Recording Devices*) (citing other sample foreign attachment provisions contained in tariffs).

²³ *Attached Recording Devices*, 11 FCC at 1048; see also Note, *Competition in the Telephone Equipment Industry: Beyond Telerent*, 86 YALE L.J. 538, 546 n.33 (1977).

²⁴ *Use of the Carterfone Device in Message Toll Telephone Service; Thomas F. Carter and Carter Electronics Corp., Dallas, Tex. (Complainants), v. American Telephone and Telegraph Co., Associated Bell System Companies, Southwestern Bell Telephone Co., and General Telephone Co. of the Southwest (Defendants)*, Docket Nos. 16942, 17073, Decision, 13 FCC 2d 420, 424 (1968), *recon. denied*, 14 FCC 2d 571 (1968) (*Carterfone*). Although *Carterfone* is typically heralded as the decision evincing the major shift in regulatory philosophy, incumbent control over CPE was gradually reduced under a number of decisions continuing into the early 1980s. See *Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS)*, Docket No. 19528, First Report and Order, 56 FCC 2d 593, 599, para. 17, 612–13, paras. 53–54 (1975); *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Docket No. 20828, Final Decision, 77 FCC 2d 384, 388 (1980) (*Computer II Final Decision*) (subsequent history omitted).

²⁵ Michael T. Hoeker, *From Carterfone to the iPhone: Consumer Choice in the Wireless Telecommunications Marketplace*, 17 COMMLAW CONSPECTUS 187, 192 (2008); STEPHEN SEGALLER, NERDS 2.0.1: A BRIEF HISTORY OF THE INTERNET 74 (1998); Kevin Werbach, *The Federal Computer Commission*, 84 N.C. L. REV. 1, 21 (2005).

²⁶ See generally Nicholas Johnson, *Carterfone: My Story*, 25 SANTA CLARA COMP. & HIGH TECH L.J. 677 (2009).

26. The Commission also addressed the rise of computer-based communications. Initially, the fledgling computer industry was separate from the networking industry, but as data processing and data transmission became more synergistic, the industries began to converge. Recognizing that the gatekeepers in the transmission market could impede competition in the processing market by preferential treatment of their own data processing units,²⁷ the Commission initiated the *Computer Inquiries*,²⁸ a series of proceedings that ensured an open telecommunications platform that would support the rapidly evolving computer market.²⁹

27. The *Computer Inquiries* created a dichotomy between basic and enhanced services.³⁰ Basic services, the function of the telecommunications infrastructure, transmitted communications without change in form or content; enhanced services were essentially everything else that combined computer processing with telecommunications.³¹ Because basic services were the platforms upon which enhanced services would be built, the Commission sought to ensure that they would be provided in an open and transparent manner.³² During the 1990s, the *Computer Inquiries* rules, and Commission policy regarding the access charge exemption for dial-up Internet service providers, helped enable thousands of companies to enter the dial-up Internet service provider market, contributing to the rapid growth of the Internet.³³ In the Telecommunications Act of 1996, Congress built upon the distinction between

²⁷ *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services*, Final Decision, 28 FCC 2d 267, 269, para. 9 (1971) (*Computer I Final Decision*).

²⁸ *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services*, Notice of Inquiry, 7 FCC 2d 11, 16, para. 21 (1966) (*Computer I Notice of Inquiry*).

²⁹ *Computer I Final Decision*, 28 FCC 2d at 268, para. 7 (“There is virtually unanimous agreement . . . that the data processing industry[’s] importance to the economy will increase in both absolute and relative terms in the years ahead. There is similar agreement that . . . data processing cannot survive, much less develop further, except through reliance upon and use of communication facilities and services.”).

³⁰ *Computer II Final Decision*, 77 FCC 2d at 420, para. 97.

³¹ 47 C.F.R. § 64.702(a); *Computer II Final Decision*, 77 FCC 2d at 420, para. 97.

³² Under *Computer II*, the Commission required the Bell Operating Companies (BOCs) to offer enhanced services only through structurally separate corporations that could obtain transmission facilities from their BOC affiliates only by tariff. Other incumbent local telephone companies were required to offer basic services to all enhanced service providers. See, e.g., *Computer II Final Decision*, 77 FCC 2d at 474–75, para. 231. Recognizing the potential efficiencies of integrated operation, the Commission later, in *Computer III*, gave the BOCs the option of providing enhanced services under non-structural openness requirements. See *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Computer III)*, CC Docket No. 85-229, Phase I, Report and Order, 104 FCC 2d 958, 964–65, paras. 3–6 (1986) (*Computer III Phase I Order*) (subsequent history omitted).

³³ See, e.g., *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing; End User Common Line Charges*, CC Docket Nos. 96-262, 94-1, 91-213, 95-72, First Report and Order, 12 FCC Rcd 15982, 16131–35, paras. 341–48 (1997) (subsequent history omitted) (holding that Internet access service providers, among other information service providers, should not be required to pay interstate access charges to local phone companies); *Bell Atlantic Telephone Companies Offer of Comparably Efficient Interconnection to Providers of Internet Access Services*, CCBP01 96-09, Order, 11 FCC Rcd 6919 (CCB 1996)); see also MCI May 28, 2004 Comments, WC Docket No. 04-36, at 16 (“[I]t is unlikely that the development of the Internet, and subsequent rapid innovation, would have occurred had the Commission’s *Computer II* rules not ensured that the underlying transmission facilities were available to networking researchers and pioneering ISPs”). One such ISP, AOL, grew rapidly during the 1990s and had more than 26 million subscribers to its Internet access service by the end of the year 2000, offering instant messaging, email, and access to the World Wide Web on narrowband connections. See *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, 16 FCC Rcd 6547, 6557–58, paras. 28–29 (2001).

platforms and services provided on top of those platforms in codifying separate definitions for telecommunications services (a category that includes all basic services) and information services (a category that includes all enhanced services).³⁴

C. Commission Focus on Preserving the Open Internet

28. For many years and in a variety of different proceedings and contexts, the Commission has considered the issue of network openness and developed policies to preserve and promote the open Internet. During this process, the Commission has provided interested parties and the public with a variety of opportunities to provide input and to develop the factual record at the agency. As described below, the evidence and analysis generated by these proceedings form the foundation for the present Notice.

29. Beginning in 2002, the Commission has classified cable modem service,³⁵ wireline broadband Internet access service,³⁶ wireless-enabled broadband Internet access service,³⁷ and broadband-over-powerline-enabled Internet access service as information services,³⁸ removing them from potential regulation under Title II of the Communications Act. The Commission also allowed wireline carriers to provide broadband Internet access services free of *Computer Inquiry* obligations.³⁹

30. In 2005, concurrent with classifying wireline broadband Internet access service as a Title I service, the Commission directly addressed Internet openness by issuing the *Internet Policy Statement*.⁴⁰ In the *Policy Statement*, the Commission recognized that it had the “duty to preserve and promote the vibrant and open character of the Internet.”⁴¹ The *Policy Statement* reflected “each Commissioner’s core

³⁴ Telecommunications Act of 1996, Pub. L. No. 104-104, § 3(a)(2), 110 Stat. 56, 58–60 (1996), *codified at* 47 U.S.C. § 153(20), (46).

³⁵ *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002), *aff’d*, *NCTA v. Brand X*, 545 U.S. 967 (2005).

³⁶ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings; Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160(c) with Regard to Broadband Services Provided Via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided Via Fiber to the Premises; Consumer Protection in the Broadband Era*, CC Docket Nos. 02-33, 95-20, 98-10, 01-337, WC Docket Nos. 04-242, 05-271, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) (*Wireline Broadband Order*), *aff’d*, *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007).

³⁷ *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd 5901 (2007) (*Wireless Broadband Classification Order*).

³⁸ *United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, WC Docket No. 06-10, Memorandum Opinion and Order, 21 FCC Rcd 13281 (2006).

³⁹ *Wireline Broadband Order*, 20 FCC Rcd at 14887–88, para. 65.

⁴⁰ *Internet Policy Statement*, 20 FCC Rcd at 14987.

⁴¹ *Id.* at 14987, para. 3

beliefs about certain rights all consumers of broadband Internet access should have.”⁴² The Commission determined that consumers are entitled to:

access the lawful Internet content of their choice[;] . . . run applications and use services of their choice, subject to the needs of law enforcement[;] . . . connect their choice of legal devices that do not harm the network[; and] . . . competition among network providers, application and service providers, and content providers.⁴³

All of these principles are subject to providers’ need to reasonably manage their networks.⁴⁴ The Commission stated that it would incorporate the principles in its *Internet Policy Statement* into its ongoing policymaking activities in order to “foster creation, adoption and use of Internet broadband content, applications, services and attachments, and to ensure consumers benefit from the innovation that comes from competition.”⁴⁵

31. At the same time, in the 2005 *Wireline Broadband Order*, the Commission recognized its ability to act pursuant to its ancillary jurisdiction to protect consumers in connection with their broadband Internet access services.⁴⁶ The Commission stated that it would monitor “all consumer-related problems” arising in connection with broadband Internet access services⁴⁷ and would not hesitate to impose regulatory obligations “necessary to ensure consumer protection and network security and reliability” in connection with those services.⁴⁸ These statements were consistent with the Commission’s statement in the *Cable Modem Order* that it would “monitor the industry closely”⁴⁹ while it examined, among other issues, whether “the threat that subscriber access to Internet content or services could be blocked or impaired, as compared to content or services provided by the cable operator or its affiliate, [was] sufficient to justify regulatory intervention at this time.”⁵⁰

32. The Commission has also evaluated open Internet concerns in the context of particular adjudications. In 2005, for example, the Enforcement Bureau entered into a consent decree with Madison

⁴² *Wireline Broadband Order*, 22 FCC Rcd at 14976 (separate statement of Chairman Martin); *see id.* at 14980 (separate statement of Commissioner Copps) (recognizing that the Commission “need[s] to keep 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”); *id.* at 14983 (separate statement of Commissioner Adelstein) (stating that articulating in the *Internet Policy Statement* “a core set of principles for consumers’ access to broadband and the Internet” was essential for his support of the *Wireline Broadband Order*).

⁴³ *Internet Policy Statement*, 20 FCC Rcd at 14987–88, para. 4. In a 2004 speech, then-Chairman Powell described four “Internet freedoms,” under which “consumers should have access to their choice of legal content . . . , to run the applications of their choice . . . , [and] to attach any devices they choose [to their broadband Internet access service] connection[s] . . . , [and] should receive meaningful information regarding their service plans.” Michael K. Powell, *Preserving Internet Freedom: Guiding Principles for the Industry*, at 5 (Feb. 8, 2004) (Powell, *Internet Freedom*), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf; *see also infra* para. 118.

⁴⁴ *Id.* at 14988 n.15.

⁴⁵ *Id.*, 20 FCC Rcd at 14988, para. 5. The Commission has conditioned merger approvals on the merged entity’s compliance with these obligations. *See, e.g., SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18392, para. 211 (2005).

⁴⁶ *Wireline Broadband Order*, 20 FCC Rcd at 14914, para. 110.

⁴⁷ *Id.* at 14929, para. 145 (emphasis added).

⁴⁸ *Id.* at 14915, para. 111.

⁴⁹ *Cable Modem Order*, 17 FCC Rcd at 4844, para. 84.

⁵⁰ *Id.* at 4845, para. 87.

River Communications, a telephone company and provider of digital subscriber line (DSL) service, that halted Madison River's practice of blocking its subscribers' ability to use voice over Internet Protocol (VoIP).⁵¹ Vonage had complained that Madison River Communications was blocking ports that were typically used by Vonage customers to make VoIP telephone calls. After an investigation, the Enforcement Bureau negotiated a consent decree, which required Madison River to stop blocking the VoIP ports and refrain from otherwise inhibiting customers from using the VoIP applications of their choice.⁵²

33. A number of merger proceedings also prompted public comment on Internet openness and led to Internet openness conditions agreed to by the parties. In the 2005 SBC/AT&T and Verizon/MCI mergers, the Commission noted the applicants' commitments to comply with the Commission's *Internet Policy Statement*, among other things, and adopted them as express conditions for approval of the merger.⁵³ Similarly, comments on the 2005–2006 proposed Adelphia/Time Warner/Comcast transfers of control also sought protections to safeguard the open Internet.⁵⁴ Although the Commission did not adopt any formal conditions on the transactions there, the Commission made clear that “[i]f in the future evidence arises that any company is willfully blocking or degrading Internet content, affected parties may file a complaint with the Commission,”⁵⁵ and noted that its *Internet Policy Statement* “contains principles against which the conduct of Comcast [and] Time Warner . . . can be measured.”⁵⁶

⁵¹ *Madison River Communications*, File No. EB-05-IH-0110, Order, 20 FCC Rcd 4295 (EB 2005) (*Madison River Order*).

⁵² See *Madison River Order*, 20 FCC Rcd 4295.

⁵³ *SBC Communications, Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18392, para. 211 (2005); *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, WC Docket No. 05-75, Memorandum Opinion and Order, 20 FCC Rcd 18433, 18537, para. 221 (2005); see also Opposition of Vonage Holdings Corp., WC Docket No. 05-65, at 15–17 (Apr. 25, 2005) (“[T]he FCC should require SBC to adopt net neutrality requirements that guarantee that it will not discriminate, block or provide inferior access to VoIP or other IP-enabled services its competitors might provide to SBC’s broadband customers.”); Jacqueline Fralley July 18, 2005 Comments, WC Docket No. 05-65, at 1 (“The big Bell companies are blocking access to their networks and stopping competition before it can even begin for local, long-distance, the Internet, cell phone services, and new technologies like making calls over the Internet.”); Letter from ATX Communications, et al., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-75 (filed Apr. 23, 2005) (seeking “Net neutrality requirements prohibiting ILEC blocking, or provision of inferior access to non-ILEC IP-enabled services”); Colette Cave June 21, 2005 Comments, WC Docket No. 05-75, at 1.

⁵⁴ See, e.g., Letter from Henry Goldberg, Attorney for Skype, Inc., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 05-192 (filed June 14, 2006) (“We suggested that a nondiscrimination principle was equally important to assuring an open Internet.”); Hubert Range, Jr. June 7, 2006 Comments, MB Docket No. 05-192, at 1 (“If the FCC decides to allow the merger, . . . [p]lease don’t make it easier for Comcast and Time Warner to block free speech, raise prices, and keep out competitors.”).

⁵⁵ *Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation, (and Subsidiaries, Debtors-In-Possession), Assignors, to Time Warner Cable Inc. (Subsidiaries), Assignees, Adelphia Communications Corporation, (and Subsidiaries, Debtors-In-Possession), Assignors and Transferors, to Comcast Corporation (Subsidiaries), Assignees and Transferees, Comcast Corporation, Transferor, to Time Warner Inc., Transferee, Time Warner Inc., Transferor, to Comcast Corporation, Transferee*, MB Docket No. 05-192, Memorandum Opinion and Order, 21 FCC Rcd 8203, 8298, para. 220 (2006) (*Adelphia/Time Warner/Comcast Order*).

⁵⁶ *Id.* at 8299, para. 223.

34. In the six months between seeking comment on the proposed AT&T/BellSouth merger and adopting an order granting the merger subject to conditions in 2006, the Commission received filings requesting that the Commission protect “network neutrality.”⁵⁷ In that proceeding, the applicants committed to “maintain a neutral network and neutral routing in [the merged entity’s] wireline broadband Internet access service,” which the Commission adopted as a formal condition of the merger.⁵⁸ That nondiscrimination requirement was “satisfied by AT&T/BellSouth’s agreement not to provide or to sell to Internet content, application, or service providers, including those affiliated with AT&T/BellSouth, any service that privileges, degrades or prioritizes any packet transmitted over AT&T/BellSouth’s wireline broadband Internet access service based on its source, ownership or destination.”⁵⁹ This obligation extended to AT&T/BellSouth’s WiMAX fixed wireless broadband Internet access service.⁶⁰ It did not extend to “AT&T/BellSouth’s enterprise managed IP services” or “AT&T/BellSouth’s Internet Protocol television (IPTV) service,”⁶¹ and it sunset on December 29, 2008.⁶²

35. In 2007, the Commission initiated an industry-wide proceeding regarding broadband Internet, noting that vigilance and a willingness to act were necessary to keep the Internet open.⁶³ In unanimously adopting the *Broadband Industry Practices Notice of Inquiry*, the Commission sought to obtain “a fuller understanding of the behavior of broadband market participants today, including network platform providers, broadband Internet access service providers, other broadband transmission providers, Internet service providers, Internet backbone providers, content and application service providers, and

⁵⁷ See, e.g., Starla Allen May 24, 2006 Comments, WC Docket No. 06-74 at 1 (“The FCC should also ensure that these companies cannot discriminate against any Internet content or rival service and that every service will be treated exactly the same (‘Network Neutrality’).”).

⁵⁸ See *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, WC Docket No. 06-74, Memorandum Opinion and Order, 22 FCC Rcd 5662, 5663, para. 2 (2007) (*AT&T/BellSouth Merger Order*); see also *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18392, para. 211 (2005).

⁵⁹ Letter from Robert W. Quinn, Senior Vice President, AT&T, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 06-74, at 9 (filed Dec. 28, 2006); see also *infra* section IV.D. “This commitment shall apply to AT&T/BellSouth’s wireline broadband Internet access service from the network side of the customer premise equipment up to and including the Internet Exchange Point closest to the customer’s premise, defined as the point of interconnection that is logically, temporally or physically closest to the customer’s premise where public or private Internet backbone networks freely exchange Internet packets.” *Id.*

⁶⁰ See *AT&T Inc./BellSouth Merger Order*, 22 FCC Rcd 5662, 5814 (Appendix F). Under another provision of the merger commitments, AT&T/BellSouth was required to divest all of the Broadband Radio Service (BRS)/Educational Broadband Service (EBS) spectrum then licensed to or leased by BellSouth—and used in the provision of fixed WiMAX services—within one year of the Merger Closing Date. See *id.* at 5816.

⁶¹ *Id.* at 10; see also *id.* (“These exclusions shall not result in the privileging, degradation, or prioritization of packets transmitted or received by AT&T/BellSouth’s non-enterprise customers’ wireline broadband Internet access service from the network side of the customer premise equipment up to and including the Internet Exchange Point closest to the customer’s premise, as defined [elsewhere in the commitment].”).

⁶² See *id.* (holding that the obligation would sunset two years after the merger closing date); Letter from Wayne Watts, Senior Vice President and Associate General Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 06-74, at 1 (filed Jan. 29, 2007) (stating that the merger had closed on December 29, 2006).

⁶³ See *Broadband Industry Practices*, WC Docket No. 07-52, Notice of Inquiry, 22 FCC Rcd 7894, 7901 (2007) (*Notice of Inquiry*) (Statement of Chairman Kevin J. Martin: “The Commission is ready, willing, and able to step in if necessary.”); *Notice of Inquiry*, 22 FCC Rcd at 7909 (Statement of Commissioner Robert M. McDowell: “[W]e must remain vigilant against possible market failure or anticompetitive conduct that would hamper the full development of the Internet and related services being provided to consumers.”).

others.”⁶⁴ The *Notice of Inquiry* specifically sought comment on “packet management practices,”⁶⁵ “pricing practices for broadband and related services,”⁶⁶ and whether the *Internet Policy Statement* should be amended or expanded.⁶⁷ It asked whether the Commission should incorporate a “new principle of non-discrimination” into the *Internet Policy Statement* and, if so, how to apply such a principle.⁶⁸ Concerned about the limited transparency of broadband Internet access providers’ practices, the Commission asked “whether providers disclose their [network management and pricing] practices to their customers, to other providers, to application developers, and others.”⁶⁹ The Commission received substantial public input.

36. When the Commission received a complaint in November 2007 regarding Comcast’s network management practices,⁷⁰ the Commission recognized that the commentary in the *Broadband Industry Practices* proceeding could help inform its evaluation of the situation and incorporated the Comcast complaint into the *Notice of Inquiry* proceeding. At the same time, the Commission received a separate petition to commence a rulemaking proceeding regarding broadband industry practices.⁷¹ The Commission invited public comment on both filings⁷² and held open hearings in Cambridge, Massachusetts and Palo Alto, California to discuss broadband network management practices with policy experts, engineers, and members of the public.⁷³

37. In August 2008, the Commission adopted the *Comcast Network Management Practices Order*.⁷⁴ The Commission premised its decision on a record of more than 6,000 comments (comprising 60,000 pages) and input from public hearings.⁷⁵ In doing so, the Commission resolved both the formal complaint against Comcast and the 22,284 email complaints the Commission had received regarding

⁶⁴ *Notice of Inquiry*, 22 FCC Rcd at 7896, para. 8.

⁶⁵ *Id.*

⁶⁶ *Id.* at 7897, para. 9.

⁶⁷ *Id.* at 7898, para. 10.

⁶⁸ *Id.*

⁶⁹ *Id.* at 7897–98, para. 9.

⁷⁰ Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC’s Internet Policy Statement and Does Not Meet an Exception for “Reasonable Network Management” (filed Nov. 1, 2007), available at http://www.fcc.gov/broadband_network_management/fp_et_al_nn_declaratory_ruling.pdf.

⁷¹ Petition of Vuze, Inc. to Establish Rules Governing Network Management Practices by Broadband Network Operators (filed Nov. 14, 2007), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519811711.

⁷² *Comment Sought on Petition for Rulemaking to Establish Rules Governing Network Management Practices by Broadband Network Operators*, WC Docket No. 07-52, Public Notice, 23 FCC Rcd 343 (2008); *Comment Sought on Petition for Declaratory Ruling Regarding Internet Management Policies*, WC Docket No. 07-52, Public Notice, 23 FCC Rcd 340 (2008).

⁷³ See FCC, Broadband Network Management Practices En Banc Public Hearing I, WC Docket No. 07-52 (Feb. 25, 2008), http://www.fcc.gov/broadband_network_management/hearing-ma022508.html; FCC, Broadband Network Management Practices En Banc Public Hearing II, WC Docket No. 07-52 (Apr. 17, 2008), http://www.fcc.gov/broadband_network_management/hearing-ca041708.html.

⁷⁴ See *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC’s Internet Policy Statement and Does Not Meet an Exception for “Reasonable Network Management,”* File No. EB-08-IH-1518, WC Docket No. 07-52, Memorandum Opinion and Order, 23 FCC Rcd 13028 (2008) (*Comcast Network Management Practices Order*).

⁷⁵ See *id.* at 13055, para. 46.

Comcast's practices.⁷⁶ In the *Comcast Network Management Practices Order*, the Commission reaffirmed its authority to enforce federal policy regarding Internet network management practices⁷⁷ and focused its inquiry on the public harms caused by Comcast's "invasive and outright discriminatory" network management practices.⁷⁸ The Commission specifically noted Comcast's failure to disclose its practices to consumers⁷⁹ and required Comcast to disclose its then-current and future practices so that the Commission and the public could ensure compliance with Comcast's voluntary commitment to abandon its discriminatory network management practices.⁸⁰ Comcast has now challenged that order, and the case is pending before the United States Court of Appeals for the District of Columbia Circuit.⁸¹

38. The two-year-old *Broadband Industry Practices* proceeding remains active. To date, the docket contains more than 35,000 filings comprising over 80,000 pages.

39. The Commission has also considered the applicability of the *Internet Policy Statement* principles to mobile wireless providers in multiple proceedings. In 2007, Skype Communications S.A.R.L. (Skype) filed a petition requesting, among other things, that the Commission declare that the openness principles embodied in *Carterfone*⁸² apply to wireless networks.⁸³ The Commission provided public notice of the petition and sought comment,⁸⁴ receiving nearly 5,000 filings totaling over 27,000 pages, addressing whether, how, and to what extent open Internet principles should apply to wireless networks.

40. Subsequent to the filing of the Skype Petition, the Commission adopted the *Wireless Broadband Classification Order*, in which it classified wireless broadband services as Title I information services, like cable modem Internet access service, wireline broadband Internet access service, and Broadband over Power Line (BPL)-enabled Internet access service.⁸⁵ In so doing, the Commission emphasized that this decision was consistent with the regulatory framework established across broadband

⁷⁶ See Requests from Numerous Parties, File No. EB-08-1H-1518 (aggregation of 22,284 requests sent to fccinfo@fcc.gov from November 1, 2007, through January 14, 2008).

⁷⁷ See *id.* at 13033–44, paras. 12–27.

⁷⁸ *Id.* at 13051, para. 42.

⁷⁹ See *id.* at 13058–59, paras. 52–53.

⁸⁰ See *id.* at 13060, para. 54.

⁸¹ See *Comcast Corporation v. FCC*, No. 08-1291 (D.C. Cir. Sept. 4, 2008).

⁸² *Carterfone*, 13 FCC 2d 420; see *supra* para. 25.

⁸³ See Petition of Skype Communications S.A.R.L. to Confirm a Consumer's Right to Use Internet Communications Software and Attach Devices to Wireless Networks, RM-11361, at 2 (filed Feb. 20, 2007) (Skype Petition). In the petition, Skype also requested that the FCC commence a rulemaking proceeding to evaluate wireless carrier practices in light of *Carterfone* and that the Commission create an industry-led mechanism to ensure the openness of wireless networks. *Id.* at 2. In its reply comments, Skype clarified that the central component of its Petition is its request that the Commission affirm that the principles contained in the Commission's *Internet Policy Statement* apply to wireless networks. Skype Communications S.A.R.L. May 15, 2007 Reply, RM-11361, at 3.

⁸⁴ *Consumer & Governmental Affairs Bureau Reference Information Center Petition For Rulemakings Filed*, Report No. 2807, Public Notice (CGB 2007). Comments were originally due on March 30, 2007. In response to two requests for extensions of time, the Wireless Telecommunications Bureau extended the comment and reply comment cycle to April 30, 2007, and May 15, 2007, respectively. *Petition to Confirm a Consumer's Right to Use Internet Communications Software and Attach Devices to Wireless Networks*, RM-11361, Order, 22 FCC Rcd 5042 (WTB 2007).

⁸⁵ *Wireless Broadband Classification Order*, 22 FCC Rcd 5901.

platforms.⁸⁶ Commissioner Coppins's concurrence stated that "now that IP-based wireless services are classified as Title I information services, the inescapable logical implication . . . is that the right to attach network devices—as well as the three other principles of our policy statement—now applies to wireless broadband services."⁸⁷

41. In April 2007, the Commission sought comment on, among other things, proposals that "support a condition on licenses for at least 30 megahertz of 700 MHz Commercial Services spectrum that would require a licensee to provide 'open access,' including the right of a consumer to use any equipment, content, application or service on a non-discriminatory basis."⁸⁸ The open platform proposal generated a full record among interested parties, with many commenters expressing their views on the degree to which—if any—wireless networks should be open, including the filing of brief comments from approximately 250,000 individual citizens.⁸⁹

42. The Commission ultimately adopted an open platform requirement for licensees in the 700 MHz Upper C Block.⁹⁰ The rules require Upper 700 MHz C-Block licensees to allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choice for Upper 700 MHz C-Block networks, provided those devices and applications meet all applicable regulatory requirements and comply with reasonable conditions related to management of the wireless network (*i.e.*, do not cause harm to the network). Further, the Commission

⁸⁶ *Id.* at 5902; *see supra* para. 29.

⁸⁷ *Id.* at 5927.

⁸⁸ *Service Rules for the 698–746, 747–762 and 777–792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010*, WT Docket Nos. 06-169, 06-150, 03-264, 01-309, 96-86, CC Docket No. 94-102, PS Docket No. 06-229, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8064, 8167–68, para. 290 (2007).

⁸⁹ *Service Rules for the 698–746, 747–762 and 777–792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review—Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule*, WT Docket Nos. 07-166, 06-169, 06-150, 03-264, 96-86, PS Docket No. 06-229, CC Docket No. 94-102, Second Report and Order, 22 FCC Rcd 15289, 15359 n.434 (2007) (*700 MHz Second Report and Order*). For example, nationwide wireless carriers AT&T and Verizon Wireless expressed their views on applicability of openness principles to wireless networks. *See* Letter from Brian Fontes, Vice President of Federal Relations, AT&T, to Marlene H. Dortch, Secretary, FCC, WT Dockets 05-265, 06-150, Attach. at 1 (filed Jul. 20, 2007) (stating that the open platform proposal "would enable the introduction of an alternative wireless business model without requiring changes in the business models of AT&T and others in what is a highly competitive wireless industry"); Letter from John T. Scott, Vice President & Deputy General Counsel, Regulatory Law, Verizon Wireless, to Marlene Dortch, Secretary, FCC, WT Docket No. 06-150 at 1 (filed Jul. 27, 2007) (stating its opposition to "the 'open access' rules proposed by Google and other parties, as well as to the rules that we understand are being considered by the Commission").

⁹⁰ *700 MHz Second Report and Order*, 22 FCC Rcd 15289; 47 C.F.R. § 27.16.

prohibited Upper 700 MHz C-Block licensees from disabling features or functionality in handsets where such action is not related to reasonable network management and protection, or compliance with applicable regulatory requirements. Subject to these conditions, the auction met the reserve price, and Verizon Wireless won the majority of C-Block licenses.

43. Further, in the 700 MHz proceeding, the Commission noted that related proceedings addressing the extent to which all wireless networks should be open—rather than only those using 700 MHz spectrum—remained pending.⁹¹

44. Since the adoption of the open platform requirement for the Upper 700 MHz C-Block, a number of wireless service providers have voluntarily adopted certain open access features. For example, the Open Handset Alliance, a group of more than 30 technology and mobile companies, has developed the Android platform, a free, open-source mobile operating system, and in 2008 T-Mobile with Google unveiled the first Android device.⁹² Further, recently, Verizon Wireless and AT&T have announced efforts to provide greater openness of their networks to devices and applications.⁹³

45. We also note that the recent notice of funds availability (NOFA) from the National Telecommunications and Information Agency (NTIA) and the Rural Utilities Service (RUS) for the Broadband Technology Opportunities Program (BTOP) and Broadband Initiatives Program (BIP) established “nondiscrimination and interconnection” requirements that would apply to all grant recipients,⁹⁴ fulfilling a Congressional mandate in the Recovery Act.⁹⁵ Among other obligations, with respect to networks funded under BTOP or BIP, grant recipients must adhere to the Commission’s *Internet Policy Statement*, must “not favor any lawful Internet applications and content over others,” and must prominently display network management policies and provide notice to customers of changes in

⁹¹ *700 MHz Second Report and Order*, 22 FCC Red at 15363 n.463 (“As we note below, the Commission has not yet made a finding regarding whether to apply open access requirements to wireless broadband services generally, and in this *Order*, defers that determination to the appropriate pending [*Broadband Industry Practices* and *Skype*] proceedings”); see also *id.* at 15361, para. 194 (noting the relationship of open platform issues in the 700 MHz context and the pending *Broadband Practices* and *Skype* proceedings).

⁹² Press Release, T-Mobile, T-Mobile Unveils the T-Mobile G1—the First Phone Powered by Android (Sept. 23, 2008), http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Pr_20080923. In addition, Verizon Wireless has established a voluntary program, the Open Development Program, to allow its customers to use the devices and applications of their choice on its entire network, and has now certified more than 30 devices on its network. Press Release, Verizon Wireless, Verizon Wireless To Introduce ‘Any Apps, Any Device’ Option For Customers In 2008 (Nov. 27, 2007), <http://news.vzw.com/news/2007/11/pr2007-11-27.html>. As an Upper 700 MHz C-Block licensee, Verizon Wireless is obligated to provide an open platform only on that specific network. We seek comment below on the application of our open Internet principles in the context of wireless services. See *infra* section IV.H.

⁹³ Press Release, Verizon Wireless, Groundbreaking Agreement Between Verizon Wireless And Google To Leverage High-Speed Network And Open Android Platform For Wireless Innovation (Oct. 6, 2009), available at <http://news.vzw.com/news/2009/10/pr2009-10-05g.html> (last visited Oct. 21, 2009) (announcing Verizon’s partnership with Google to provide Android devices on Verizon’s wireless network); Letter from Robert W. Quinn, Jr., Senior Vice President, Federal Regulatory, AT&T, to Ruth Milkman, Chief, Wireless Telecommunications Bureau, RM-11361, at 1 (filed Oct. 6, 2009) (stating that, effective immediately, AT&T consents to Apple enabling third-party VoIP applications for the iPhone that use AT&T’s wireless network, including its 2G and 3G capabilities).

⁹⁴ Broadband Initiatives Program; Broadband Technology Opportunities Program Notice, 74 Fed. Reg. 33104, 33110–11 (July 9, 2009) (Broadband NOFA).

⁹⁵ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(j), 123 Stat. 115, 515 (2009) (Recovery Act).

those policies.⁹⁶ “All these requirements shall be subject to the needs of law enforcement and reasonable network management. Thus, awardees may employ generally accepted technical measures to provide acceptable service levels to all customers, such as caching and application-neutral bandwidth allocation, as well as measures to address spam, denial of service attacks, illegal content, and other harmful activities.”⁹⁷ NTIA and RUS received more than 2,200 applications pursuant to the NOFA from providers willing to assume those obligations as a condition of receiving broadband deployment funding.⁹⁸

46. As this history illustrates, the Commission is not writing on a blank slate in this proceeding. Rather, we are proposing a next step—seeking public input on draft rules—that is based on a substantial record, which includes discussion of nondiscrimination, transparency, and application of Internet openness principles to wireless broadband Internet access service providers.

47. More generally, it has long been U.S. policy to promote an Internet that is both open and unregulated. This approach is reflected in more than two decades of FCC decisions. As noted, in its *Computer II* and *Computer III* decisions, the Commission adopted rules to prevent network operators from interfering with enhanced service providers (ESPs), and in 1983, the Commission exempted ESPs from interstate access charges.⁹⁹ As ESPs turned into information service providers under the 1996 Act, and the Internet became the dominant platform for information services, the Commission reviewed and reaffirmed the core aspects of these decisions. In 2004, the Commission asserted federal jurisdiction over Pulver.com’s Free World Dialup VoIP offering in order to declare it an information service and preempt state regulation.¹⁰⁰ The following year, when it adopted the *Wireline Broadband Order*, the Commission recognized the need to promote innovation at both the core and the edges of the Internet. It adopted the *Internet Policy Statement* to set forth principles and a process for addressing problems.¹⁰¹ Where issues have arisen, as in the case of Madison River’s VoIP blocking, the potential for anti-competitive abuses arising from the AT&T/BellSouth merger, or Comcast’s network management practices for peer-to-peer traffic, the Commission has not hesitated to respond. As the *Framework for Global Electronic Commerce* stated in 1997, government action, where needed, should support a “predictable, minimalist, consistent and simple legal environment” for online activity.¹⁰² Nothing we have done over the past several years or that we propose today alters that commitment.

⁹⁶ Broadband NOFA, 74 Fed. Reg. at 33110–11.

⁹⁷ *Id.*

⁹⁸ Testimony of Lawrence E. Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, U.S. Department of Commerce, Before the Subcommittee on Communications, Technology and the Internet, Committee on Energy and Commerce, U.S. House of Representatives, Oversight of the American Recovery and Reinvestment Act: Broadband, Part 2, at 3–4 (Sept. 10, 2009); Statement of Jonathan Adelstein, Administrator, Rural Utilities Service, USDA, Before the Subcommittee on Communications, Technology and the Internet, Committee on Energy and Commerce, U.S. House of Representatives, Oversight of the American Recovery and Reinvestment Act: Broadband, Part 2, at 4 (Sept. 10, 2009).

⁹⁹ See *MTS and WATS Market Structure*, 97 F.C.C.2d 682, 711–22 (1983).

¹⁰⁰ *Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, WC Docket No. 03-45, Memorandum Opinion and Order, 19 FCC Rcd 3307 (2004).

¹⁰¹ See *Internet Policy Statement*, 20 FCC Rcd 14988.

¹⁰² A Framework for Global Electronic Commerce (White House, 1997).

IV. DISCUSSION

48. When the Telecommunications Act of 1996 was enacted, very few Americans had residential broadband Internet access service.¹⁰³ Since the competition-based policies ushered in by the Telecommunications Act first took root through Commission implementation in the late 1990s, broadband Internet access service adoption has increased dramatically, with broadband in approximately thirty percent of American households in 2005 and sixty-three percent today.¹⁰⁴ It is important to note that from 1996 to the adoption of the Commission's *Internet Policy Statement* in August of 2005, digital subscriber line (DSL) service offered by telecommunications carriers was regulated under Title II of the Act and experienced explosive growth. Since the Commission adopted the *Internet Policy Statement* over four years ago, our nation has seen even greater expansion of broadband Internet access service. In 2005, access to the Internet was split evenly between dial-up and broadband; now less than ten percent of Americans access the Internet with dial-up.¹⁰⁵ Online retail spending increased 65 percent between 2005 and 2007.¹⁰⁶ Today nearly a fifth of online adults access Internet video on a daily basis, compared with eight percent in 2006.¹⁰⁷ Broadband Internet access has become a vital resource for, among other things, commerce,¹⁰⁸ civic engagement,¹⁰⁹ communications and telecommuting options for people with disabilities,¹¹⁰ health care,¹¹¹ and education.¹¹²

¹⁰³ For purposes of this proceeding, we propose to define the Internet as the system of interconnected networks that use the Internet Protocol for communication with resources or endpoints (including computers, web servers, hosts, or other devices) that are reachable, directly or through a proxy, via a globally unique Internet address assigned by the Internet Assigned Numbers Authority. See Internet Assigned Numbers Authority, About IANA, <http://www.iana.org/> (last visited Oct. 21, 2009). Internet addresses are those common and unique identifiers allocated by the Internet Assigned Numbers Authority to Regional Internet Registries, National Internet Registries, and Local Internet Registries. Those registries, in turn, assign Internet addresses to Internet service providers and end users. See Internet Assigned Numbers Authority, Number Resources, <http://www.iana.org/numbers/> (last visited Oct. 21, 2009); American Registry for Internet Numbers, Number Resources, <http://www.arin.net/resources/> (last visited Oct. 21, 2009). To be considered part of the "Internet" for this proceeding, an Internet end point must be identified by a unique address assigned through the Internet Assigned Numbers Authority or its delegate registry, not an address created by a user for its internal purposes. We do not intend for this definition of the Internet to encompass private intranets generally inaccessible to users of the Internet. We seek comment on these proposals.

¹⁰⁴ See JOHN HERRIGAN, PEW INTERNET AND AMERICAN LIFE PROJECT, HOME BROADBAND ADOPTION 2009, at 11 (2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf>.

¹⁰⁵ *Id.* at 10.

¹⁰⁶ CENSUS BUREAU, ONLINE RETAIL SPENDING AND PROJECTIONS (2008), available at <http://www.census.gov/compendia/statab/tables/09s1016.pdf>.

¹⁰⁷ MARY MADDEN, PEW INTERNET AND AMERICAN LIFE PROJECT, THE AUDIENCE FOR ONLINE VIDEO-SHARING SITES SHOOTS UP 3 (2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/The-Audience-for-Online-Video-Sharing-Sites-Shoots-Up.pdf>.

¹⁰⁸ See, e.g., Ralph G. Everett, Presentation to National Broadband Workshop on Economic Growth, Job Creation, and Private Investment (Aug. 26, 2009), http://www.broadband.gov/docs/ws_economy/ws_economy_everett.pdf.

¹⁰⁹ See, e.g., National Broadband Workshop Presentation on E-Government and Civic Participation (Aug. 6, 2009), http://www.broadband.gov/ws_egov.html.

¹¹⁰ See, e.g., National Broadband Workshop on Broadband Opportunities for People with Disabilities (Aug. 20, 2009), http://www.broadband.gov/ws_disability.html.

¹¹¹ See, e.g., National Broadband Workshop on Health Care (Sept. 15, 2009), http://www.broadband.gov/ws_healthcare.html.

¹¹² See, e.g., National Broadband Workshop on Education (Aug. 20, 2009), http://www.broadband.gov/ws_education.html.

49. The evolution in Internet usage, and associated developments in network technology, have respectively motivated and enabled network operators to differentiate price and service for end users and for providers of content, applications, and services. A significant debate has developed over how best to preserve the Internet's openness. We thus find it appropriate at this time to evaluate the need for oversight of broadband Internet access service providers' practices. Given the evolution of the Internet and the broadband marketplace, we believe that high-level rules specifying impermissible practices will best promote an Internet environment of widespread innovation and light-handed regulation.

A. The Need for Commission Action

50. Despite our efforts to date, some conduct is occurring in the marketplace that warrants closer attention and could call for additional action by the Commission, including instances in which some Internet access service providers have been blocking or degrading Internet traffic, and doing so without disclosing those practices to users.¹¹³ We also believe it is important to provide greater clarity and certainty to Internet users; content, application, and service providers; and broadband Internet access service providers regarding the Commission's approach to safeguarding the open Internet. As discussed below, we seek comment on the reasons either for or against particular types of oversight by the Commission of broadband Internet access service providers' practices, including possible specific rules. In undertaking this examination, we seek to preserve the open, safe, and secure Internet and to promote and protect the legitimate business needs of broadband Internet access service providers and broader public interests such as innovation, investment, research and development, competition, consumer protection, speech, and democratic engagement. Thus, in the subsequent parts of this Notice, we seek comment on how to tailor rules to achieve this balance.

1. Commission Goals

51. The Communications Act, related statutes, and Commission precedent establish a number of interrelated goals that inform the Commission's approach to broadband Internet access service. For one, the Commission seeks to promote investment and innovation with respect to the Internet, as with other communications technologies.¹¹⁴ As the Commission has recognized, "[t]he Internet has served as a

¹¹³ See, e.g., *Madison River Order*, 20 FCC Rcd 4295; *Comcast Network Management Practices Order*, 23 FCC Rcd 13028; Marcel Dischinger et al., *Detecting BitTorrent Blocking* (2008) (Dischinger, *Detecting BitTorrent Blocking*), http://www.mpi-sws.org/~mdischin/papers/08_imc_blocking.pdf.

¹¹⁴ See, e.g., 47 U.S.C. §§ 151 (instituting the Federal Communications Commission for, among other things, "the purpose of regulating interstate and foreign communication by wire and radio so as to make available, so far as possible, to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges"), 157 ("It shall be the policy of the United States to encourage the provision of new technologies and services to the public."), 230(b)(1) ("It is the policy of the United States . . . to promote the continued development of the Internet and other interactive computer services and other interactive media . . ."), 257 (mandating that the Commission conduct an ongoing review to identify and eliminate "market entry barriers for entrepreneurs and other small businesses in the provision and ownership of telecommunications services and information services, or in the provision of parts or services to providers of telecommunications services and information services," with the goal of promoting "the policies and purposes of this [Communications] Act favoring a diversity of media voices, vigorous economic competition, technological advancement, and promotion of the public interest, convenience, and necessity"), 1302(a) ("The Commission . . . shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . ."); Recovery Act § 6001(k)(1) (requiring the Commission to develop a National Broadband Plan with the goal of promoting, among other things, "private sector investment, entrepreneurial activity, job creation and economic growth"); see also 47 U.S.C. § 152.

critical platform for innovation for nearly two decades,”¹¹⁵ and “[h]istorically, ‘the innovation and explosive growth of the Internet [have been] directly linked to its particular architectural design.’”¹¹⁶

52. Promoting competition for Internet access and Internet content, applications, and services is another key goal.¹¹⁷ In particular, Section 230 of the Act states that “[i]t 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.”¹¹⁸ In adopting its *Internet Policy Statement*, the Commission recognized the importance of such competition not only “among network providers,” but also among “application and service providers, and content providers.”¹¹⁹ As the Commission has observed, “[s]o far in the Internet’s history,” the basic standards underlying the operation of the Internet “have created ‘the equivalent of perfect competition . . . among applications and content . . . with a minimum [of] interference by the network or platform owner.’”¹²⁰

53. The Act and Commission precedent likewise demonstrate the importance of protecting users’ interests as a Commission goal. These interests are wide-ranging, including consumer protection in commercial contexts;¹²¹ the development of technological tools to empower users;¹²² and speech and democratic participation.¹²³ As Congress has observed, “[t]he rapidly developing array of Internet . . .

¹¹⁵ *Fostering Innovation and Investment in the Wireless Communications Market; A National Broadband Plan For Our Future*, GN Docket Nos. 09-157, 09-51, Notice of Inquiry, 24 FCC Rcd 11322, 11337–38, para. 49 (2009).

¹¹⁶ *Comcast Network Management Practices Order*, 23 FCC Rcd at 13040, para. 20.

¹¹⁷ See, e.g., 47 U.S.C. §§ 230(b)(2), 257, 1302.

¹¹⁸ 47 U.S.C. § 230(b)(2).

¹¹⁹ *Internet Policy Statement*, 20 FCC Rcd at 14988, para. 4.

¹²⁰ *Comcast Network Management Practices Order*, 23 FCC Rcd at 13054, para. 45.

¹²¹ See, e.g., *Consumer Information and Disclosure; Truth-in-Billing and Billing Format; IP-Enabled Services*, CG Docket No. 09-158, CC Docket No. 98-170, WC Docket No. 04-36, Notice of Inquiry, 24 FCC Rcd 11380 (2009) (*Broadband Consumer Information NOI*) (seeking comment on, among other things, extending truth-in-billing requirements to customers of broadband Internet access service); *Wireline Broadband Order*, 20 FCC Rcd at 14929–31, paras. 146–49 (seeking comment on, among other things, the need for privacy, slamming, truth-in-billing, and other consumer protections for broadband Internet access service customers); Recovery Act § 6001(k)(1) (requiring the Commission to develop a National Broadband Plan with goals of promoting, among other things, “consumer welfare”).

¹²² See, e.g., 47 U.S.C. §§ 230(b)(3)–(4) (“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” and “to remove disincentives for the development and utilization of blocking and filtering technologies that empower parents to restrict their children’s access to objectionable or inappropriate online material . . .”); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers*, CG Docket No. 03-123, CC Docket No. 98-67, WC Docket No. 05-196, Second Report and Order and Order on Reconsideration, 24 FCC Rcd 791 (2008) (requiring all Internet-based telecommunications relay service users to transition to ten-digit geographically appropriate numbers).

¹²³ See, e.g., 47 U.S.C. §§ 257 (mandating that the Commission conduct an ongoing review to identify and eliminate “market entry barriers for entrepreneurs and other small businesses in the provision and ownership of telecommunications services and information services, or in the provision of parts or services to providers of telecommunications services and information services,” with the goal of promoting “the policies and purposes of this [Communications] Act favoring a diversity of media voices, vigorous economic competition, technological advancement, and promotion of the public interest, convenience, and necessity”), 521(4) (setting forth the policy to “assure that cable communications provide and are encouraged to provide the widest possible diversity of information sources and services to the public”); Recovery Act § 6001(k)(1) (requiring the Commission to develop a National Broadband Plan with goals of promoting, among other things, “civic participation”).

services available to individual Americans represent an extraordinary advance in the availability of educational and informational resources to our citizens,¹²⁴ and the Internet “offer[s] a forum for a true diversity of political discourse, unique opportunities for cultural development, and myriad avenues for intellectual activity.”¹²⁵

54. Other statutory objectives are relevant to our evaluation of broadband Internet access service providers’ practices, including addressing the needs of law enforcement and public safety.¹²⁶ Each of the goals described above informs our policy analyses, and we seek comment on how these and other relevant policy goals should affect our analysis of the Internet principles discussed below.

55. As a general matter, we believe that our proposals should have broad application so that the protections that we propose are widely enjoyed. As such, we propose to define broadband Internet access service for purpose of these rules as “[a]ny communication service by wire or radio that provides broadband Internet access directly to the public, or to such classes of users as to be effectively available directly to the public.” We do not intend that our proposals would apply to “establishments that acquire broadband Internet access service from a facilities-based provider to enable their patrons or customers to access the Internet from their respective establishments.”¹²⁷ For example, we would not intend to include coffee shops, waiting rooms, or rest areas.¹²⁸ Nor would we intend to include broadband Internet access service that is not intentionally offered for the benefit of others, such as service from personal Wi-Fi networks whose signal may be detectable outside the user’s premises.¹²⁹ We seek comment on this approach for defining the scope of entities covered by our proposals, including ways to make clear who is and is not subject to these rules.

2. Evolution of the Internet Marketplace and Technologies

56. We also note that Internet technologies have changed markedly along with the evolution of the Internet marketplace. The Internet has traditionally relied on an end-to-end, open architecture, in which network operators use their “best effort” to deliver packets to their intended destinations without quality-of-service guarantees.¹³⁰ This open architecture “allowed all application developers to make their

¹²⁴ 47 U.S.C. § 230(a)(1).

¹²⁵ 47 U.S.C. § 230(a)(3).

¹²⁶ See, e.g., 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”), 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”); Recovery Act § 6001(k)(1) (requiring the Commission to develop a National Broadband Plan with goals of promoting, among other things, “public safety and homeland security”).

¹²⁷ *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, ET Docket No. 04-295, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989, 15006–07, para. 36 (2005) (*CALEA First Report and Order*). And, consistent with the Commission’s approach in the *CALEA First Report and Order*, “[w]e note . . . that the provider of underlying facilities to such an establishment would be subject to [the new rules], as discussed above.” *Id.*

¹²⁸ See *id.* at 15007 n.99.

¹²⁹ See *id.* at 15007, para. 36.

¹³⁰ Marius Schwartz & Philip J. Weiser, *Introduction to a Special Issue on Network Neutrality*, 8 REV. OF NETWORK ECON. 1 (2009) (Schwartz & Weiser, *Introduction to Network Neutrality*), available at http://www.rnejournal.com/artman2/uploads/1/schwartz_et_al_RNE_mar09.pdf.

innovations available to all by placing a software program on a publicly available server,” but the best-effort nature of early networks presented challenges for the deployment of applications requiring quality-of-service assurances.¹³¹

57. With the rapid growth of broadband applications and content, especially video, access providers may face capacity constraints. In many cases, either provisioning additional bandwidth or using sophisticated software techniques has been sufficient to support applications requiring reliable delivery or low latency, such as real-time voice and video. For example, Skype has more than 440 million registered users for its Internet-based real-time communications application, which runs over the best-effort Internet.¹³² As Internet infrastructure and the content, applications, and services delivered over the Internet have evolved, network equipment makers have also responded with new technologies, including more sophisticated routers that enable network operators to distinguish among different classes of traffic and offer different qualities of service to different traffic (service differentiation), which enables charging different prices for different traffic (price differentiation).¹³³ For example, a broadband Internet access service provider can ensure that one class of traffic enjoys a greater share of capacity than another when there is contention for resources. A broadband Internet access service provider can also differentiate among different packet streams or classes of traffic by scheduling the transmission of certain packets waiting in a buffer ahead of others, determining by algorithm which packets in a buffer are dropped (*i.e.*, discarded and not transmitted), blocking an entire packet stream by means of an admission control algorithm, transmitting data over more (or less) efficient routing, redirecting traffic to another site, or blocking traffic entirely.¹³⁴ With “deep packet inspection,” a broadband Internet access service provider can determine which packets to favor by examining “in detail the content of [an] email, or web page, or downloaded file. It is possible to distinguish music files from text from pictures, or to search for key words within any text.”¹³⁵ A broadband Internet access service provider can also favor certain parties by providing access to information cached at the provider’s facility, allowing consumers quicker access to websites using the caching services.¹³⁶

58. Any of these techniques may be provided only to an Internet access service provider’s own affiliates and partners. Or they may be turned into a service that Internet access service providers offer to content and application providers for a fee. Equipment manufacturers note that these new technologies allow Internet access service providers to maximize the revenue opportunities associated with their networks. For example, Sandvine, a technology vendor, claims to offer a “range of policy management options such as application-based and subscriber-based approaches, aggregate and per-subscriber shaping, prioritization, caching and content acceleration.”¹³⁷ Procera Networks advertises its PacketLogic technology as giving network providers the ability to “monetize your network” by monitoring user traffic on a real-time basis and using “optimization that distinguishes between interactive

¹³¹ See Robert D. Atkinson & Philip J. Weiser, *A “Third Way” on Network Neutrality*, The Information Technology and Innovation Foundation at 4 (May 30, 2006), <http://www.itif.org/files/netneutrality.pdf>.

¹³² Skype Communications, S.A.R.L. July 21, 2009 Reply, GN Docket No. 09-51, at 1 n.1.

¹³³ Jon M. Peha, *The Benefits and Risks of Mandating Network Neutrality and the Quest for a Balanced Policy*, 1 INT’L J. OF COMM. 644 (2007) (Peha, *Quest for a Balanced Policy*), <http://ijoc.org/ojs/index.php/ijoc/article/viewFile/154/90>.

¹³⁴ See *id.* at 649.

¹³⁵ *Id.* at 648.

¹³⁶ *Id.* at 650.

¹³⁷ Sandvine, Traffic Optimization, http://www.sandvine.com/solutions/traffic_optimization.asp (last visited Oct. 21, 2009).

and downloading traffic.”¹³⁸ And Cisco offers network providers the ability to “identify[] services that might be riding an operator’s network for free” and “extend quality of service guarantees to that third party for a share of the profits.”¹³⁹

59. Four years ago, changes that were already taking place in the Internet marketplace and among network technologies led the Commission to adopt the *Internet Policy Statement*. Since then, the Internet marketplace and underlying technologies have continued to evolve, and we seek more detailed comment on the technological capabilities available today, as offered for sale and as actually deployed in providers’ networks. We further seek comment on the effects of those technologies on the content, applications, and services being provided—or capable of being provided—over the Internet.

3. The Debate Regarding Oversight of Traffic Management Pricing and Practices

60. The increasing capability of broadband Internet access service providers to offer differentiated services and prices for traffic flowing over their networks has spurred a debate about the public policy implications of using that capability. In particular, some parties have expressed concerns that, absent appropriate oversight, broadband Internet access service providers could make the Internet less useful for some users or applications by differentiating traffic based upon the user, the application provider, or the type of traffic. Other parties have suggested that “the problems are all potential problems, not actual problems”¹⁴⁰ and that the “fundamental inability to demonstrate *any* evidence of an actual market failure confirms what all the rhetoric in the world cannot obscure: ‘net neutrality’ is a solution in search of a problem.”¹⁴¹

61. In determining the Commission’s proper role with respect to safeguarding the open Internet, we believe it is helpful to examine this debate and the arguments that have been made in favor of and against open Internet policies. The arguments in this area have largely revolved around four issues: (1) how best to promote investment and innovation; (2) the current and future adequacy of competition and market forces; (3) how best to promote speech and civic participation; and (4) the practical significance of network congestion to the other considerations. We summarize and seek evidence supporting or refuting a number of these key arguments.

a. Investment and Innovation

62. The Commission has recognized that the historically open architecture of the Internet has facilitated entrepreneurs’ entry into the market with new Internet services and promoted the Act’s policies favoring “a diversity of media voices” and “technological advancement.”¹⁴² As discussed above, however, technologies now allow network operators to distinguish different classes of traffic, to offer different qualities of service, and to charge different prices to each class.

63. In light of these developments, some parties have contended that safeguarding historic Internet traffic pricing and practices is needed to preserve the end-to-end architecture of the Internet, with

¹³⁸ Procera Networks Inc., White Paper, *If You Can See It, You Can Monetize It* at 2–3 (2008), http://www.proceranetworks.com/images/documents/procera_brochure_web_0620.pdf.

¹³⁹ Cisco Systems, White Paper, *Deploying Premium Services Using Cisco Service Control Technology* at 2 (2008), http://www.cisco.com/en/US/prod/collateral/ps7045/ps6129/ps6133/ps6150/prod_brochure0900aecd8025258e.pdf.

¹⁴⁰ Gerald R. Faulhaber, *Network Neutrality: The Debate Evolves*, 1 INT’L J. OF COMM. 680, 697 (2007) (Faulhaber, *Network Neutrality*).

¹⁴¹ AT&T June 16, 2007 Reply, WC Docket No. 07-52, at 3.

¹⁴² *Comcast Network Management Practices Order*, 23 FCC Rcd at 13040, para. 20.

intelligence and control at the edge of the network.¹⁴³ These proponents of open Internet policies maintain that the end-to-end architecture is essential to give entrepreneurs confidence that they will be free to innovate on the Internet without first seeking permission from broadband Internet access service providers and, accordingly, is necessary to promote innovation and growth.¹⁴⁴ Supporters argue that differentiation by Internet access service providers can be especially harmful to innovation by outsiders—individuals and entities unaffiliated with network owners—who have been responsible for some of the most important innovations in the history of the Internet.¹⁴⁵ These outsiders, many of whom may have limited resources but can innovate on today’s Internet with very low marginal costs, could choose not to innovate if faced with fees from Internet access service providers for equal access to end users.¹⁴⁶ And

¹⁴³ 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 5–8 (Apr. 17, 2008) (“The original architecture of the Internet was based on a design principle called the end-to-end arguments. As a result of this design, the network is general and can support a large variety of applications with different requirements. The network is not optimized in favor of specific applications. While [singling out specific applications for differential treatment] may increase the performance of particular applications, it also constitutes an unnecessary and therefore inefficient feature for applications that do not need this function and may even rule out the implementation of applications that are not foreseen at the time of the design. Instead, all application-specific functionality is implemented at the end hosts, *i.e.*, the computers at the edge of the network. . . . [T]his design results in an economic environment for innovation that is much more conducive to application-level innovation than network architectures that deviate from the broad version of the end-to-end arguments.”); Testimony of Vinton G. Cerf Before the Senate Committee on Commerce, Science, and Transportation, at 2 (Feb. 7, 2006) (“The Internet’s open, neutral architecture has proven to be an enormous engine for market innovation, economic growth, social discourse, and the free flow of ideas. The remarkable success of the Internet can be traced to a few simple network principles—end-to-end design, layered architecture, and open standards—which together give consumers choice and control over their online activities.”).

¹⁴⁴ See, e.g., Legacy AT&T May 28, 2004 Comments, WC Docket 04-36, at 54 (“If there is even a serious risk that such access can be blocked by the entities that control the last mile network facilities necessary for Internet access, the capital markets will not fully fund IP-enabled services.”); see also Testimony of Lawrence Lessig Before the U.S. Senate Committee on Commerce, Science, and Transportation, at 6 (Feb. 7, 2006) (“If the principle of end-to-end is abandoned . . . innovators must now include in their calculation of risk the threat that the network owner might either block or tax a particular application. That increased risk will reduce application investment.”).

¹⁴⁵ Robert T. Atkinson & Richard Bennett, Information Technology and Innovation Foundation, Prepared Remarks for the Big Ideas Workshop, National Broadband Plan, Federal Communications Commission, at 4 (Sept. 3, 2009); see also, e.g., *id.* (“With regard to the particular area of network architecture research, it doesn’t take large teams with enormous budgets to make fundamental advances. Paul Baran worked with a very small team, as did Louis Pouzin, the inventor of the framework for end-to-end networks that informs the Internet of today (as well as the four other major packet networks created during the same period as the Internet).”).

¹⁴⁶ In addition to the effect on innovation of (even nondiscriminatory) departure from “zero pricing,” see *infra* para. 68; Nicholas Economides, “Net Neutrality,” *Non-discrimination and Digital Distribution of Content Through the Internet*, 4 I/S: A J. OF L. & POL. FOR THE INFO. SOC’Y 209, 224 (2008) (Economides, *Digital Distribution*), discrimination designed to exclude application, content, and service providers offering products competitive with those offered by a broadband Internet access service provider or its affiliates can also reduce the incentive for innovation. See, e.g., Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. ON TELECOMM. AND HIGH TECH. L. 329, 378–80 (2007) (van Schewick, *Towards an Economic Framework*) (“A potential innovator bases its decision to innovate on the expected costs and benefits of realizing the innovation. Facing the threat of discrimination, potential innovators in affected markets will expect lower profits. Thus, the threat of discrimination reduces their incentives to innovate Even if a network provider does not currently offer a competing product, it may be tempted to imitate the entrant, exclude the entrant from its network and exploit the complimentary market itself, once the entrant starts to make significant profits.”).

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 I/S: 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 prejudice 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 1 (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.

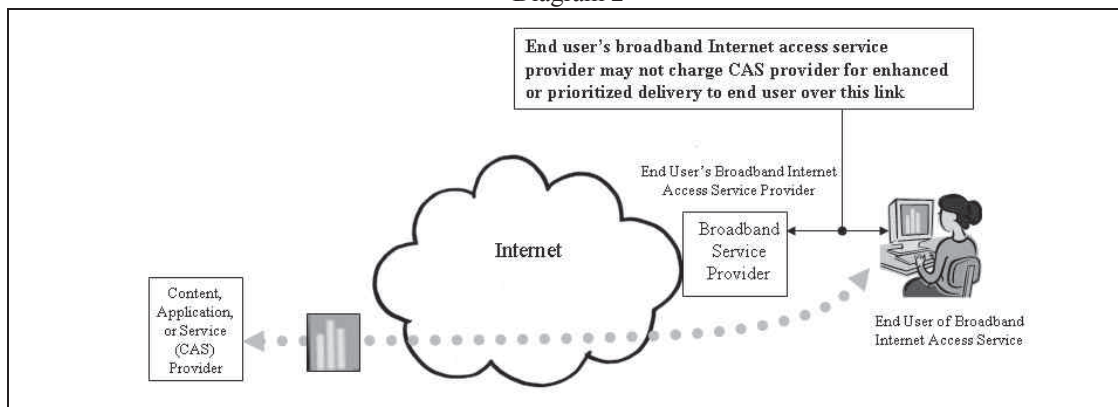
²²⁶ One author poses the regulatory question as follows: "Can we limit how network operators can discriminate in a manner that [1] prevents them from fully exploiting market power in ways that seriously harm users, and [2] does not prevent them from using discrimination in ways that greatly benefit users?" 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., CCIA 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 Red 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.

need guaranteed access to reliable communications over the Internet in order to coordinate disaster relief and other response efforts, or for other emergency communications. Guaranteeing quality of service for these purposes may be critically important to our national security and safety.²⁶⁵ For example, during a public health emergency, increased absenteeism and utilization of teleworking would likely increase the number of users seeking to access the Internet from numerous discrete points (e.g., residences). The performance of essential functions could be impeded by unmanaged network congestion resulting from this change in usage patterns.

146. 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 deliver emergency communications, or to address the needs of public safety or national or homeland security authorities, consistent with applicable law.

147. 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 public safety or national or homeland security, including in ways that, in the absence of the exception proposed in this section, might conflict with the rules we propose today. We reiterate our desire for specific examples and data regarding these issues.

G. Managed or Specialized Services

148. As rapid innovation in Internet-related services continues, we recognize that there are and will continue to be Internet-Protocol-based offerings (including voice and subscription video services, and certain business services provided to enterprise customers), often provided over the same networks used for broadband Internet access service, that have not been classified by the Commission. We use the term “managed” or “specialized” services to describe these types of offerings.²⁶⁶ The existence of these services may provide consumer benefits, including greater competition among voice and subscription video providers, and may lead to increased deployment of broadband networks.

149. We recognize that these managed or specialized services may differ from broadband Internet access services in ways that recommend a different policy approach, and it may be inappropriate to apply the rules proposed here to managed or specialized services. However, we are sensitive to any risk that the growth of managed or specialized services might supplant or otherwise negatively affect the open Internet. In this section, we seek comment on whether and, if so, how the Commission should address managed or specialized IP-based services in order to allow providers to develop new and innovative technologies and business models and to otherwise further the goals of innovation, investment, competition, and consumer choice, while safeguarding the open Internet.

150. We begin by seeking comment on what functions such managed or specialized services might fulfill. For example, AT&T offers its U-verse multi-channel, Internet-Protocol-based video service

²⁶⁵ See 47 U.S.C. § 151. We also note that there are several instances in which the Commission has allowed prioritization of public safety communications on telecommunications networks. See 47 C.F.R. § 90.1405(f); *700 MHz Second Report and Order*, 22 FCC Rcd at 15441–43, paras. 426–30 (rules for the Upper 700 MHz D Block requiring the licensee to prioritize public safety communications over commercial uses on a real-time basis); 47 C.F.R. Part 64, Apps. A–B (rules addressing Telecommunications Service Priority and Wireless Priority Services).

²⁶⁶ Cf. BTOP/BIP NOFA, 74 Fed. Reg. at 33111 (July 9, 2009), http://www.ntia.doc.gov/frnotices/2009/FR_BBNOFA_090709.pdf (“In addition to providing the required connection to the Internet, awardees may offer managed services, such as telemedicine, public safety communications, and distance learning, which use private network connections for enhanced quality of service, rather than traversing the public Internet.”).

through the same network as its fiber-based broadband Internet access offering,²⁶⁷ and the record in our National Broadband Plan proceeding includes discussion of potential future offerings such as specialized telemedicine, smart grid, or eLearning applications that may require or benefit from enhanced quality of service rather than traditional best-effort Internet delivery.²⁶⁸ What other managed or specialized services are currently being offered or may be offered in the near future? What specific content, applications, or services may require enhanced quality-of-service offerings, and why? What kinds of special or enhanced treatment are required? Are or will managed or specialized services be provided over the same network and to the same users who subscribe to broadband Internet access service? We encourage commenters to be as specific as possible about the current or likely future identity of such offerings; their technical characteristics, including whether they traverse more than one service provider's network; the technical characteristics of any enhanced quality of service offering that might be required for such content, application, or service; and sales and marketing arrangements for such content, application, or service, as well as for any enhanced quality of service offering (e.g., are or would such offerings be sold or marketed as part of other services or as a distinct service, whether bundled or stand-alone?).

151. More generally, how should we define the category of managed or specialized services? How are managed or specialized services different from broadband Internet access service as defined in this Notice, and what are their essential distinguishing characteristics? Is allocation of available bandwidth for managed or specialized services versus broadband Internet access services a critical factor in analyzing such issues?

152. In addition, we seek comment on what policies should apply to managed or specialized services, if any, in light of the Commission's statutory mandate and the goals of this rulemaking process. Should the Commission classify these services for policymaking purposes, and if so, how? If rules are appropriate in this area, what should those rules state? Should any of the rules proposed here for broadband Internet access service apply to managed or specialized services?

153. Finally, we seek comment on what impact managed or specialized services might have on the open Internet and the advancement of the goals of this rulemaking process, and how the Commission should address any such impacts. Will managed or specialized services increase or reduce investment in broadband network deployment and upgrades? Will network providers provide sufficient capacity for robust broadband Internet access service on shared networks used for managed or specialized services? Again, we encourage commenters to be as specific and fact-based as possible in addressing these issues.

H. Applicability of Principles to Different Broadband Technology Platforms

154. As our choices for accessing the Internet continue to increase, and as users connect to the Internet through different technologies, the principles we propose today seek to safeguard its openness for all users. We affirm that the six principles that we propose to codify today would apply to all platforms for broadband Internet access. Nevertheless, we acknowledge that technological, market structure, consumer usage, and historical regulatory differences between different Internet access platforms may

²⁶⁷ See Douglas A. Kerr, *The AT&T U-verse Service* (Jun. 5, 2009), <http://pumpkin.annex.home.att.net/articles/U-verse.pdf>; Steve Kim, *The Problem with AT&T's U-Verse*, EngadgetHD.com (Dec. 18, 2007), <http://www.engadgethd.com/2007/12/18/the-problem-with-atandts-u-verse/>; Carol Wilson, *Reporter's Notebook*, Telephony Online (Oct. 26, 2007), http://telephonyonline.com/broadband/technology/telcotv_att_iverse_102607/.

²⁶⁸ See, e.g., Verizon Aug. 31, 2009 Comments, GN Docket No. 09-51, at 12 (“[D]ifferentiated service offerings could help to ensure the functioning of latency- or jitter-sensitive applications in ways not possible with pure, best-efforts Internet services.”); TIA June 5, 2009 Comments, GN Docket No. 09-51, at 11 (“By managing traffic, Internet access providers can ensure that jitter- and latency-sensitive traffic, as well as traffic designed to enhance essential services such as health care and public safety, is assured passage through the network in a manner consistent with user needs and expectations.”).

justify differences in *how* we apply the Internet openness principles to advance the goals of innovation, investment, research and development, competition, and consumer choice. While there has been considerable discussion and factual development regarding openness issues in the wireline context, other Internet access platforms present additional important issues related to openness that merit focused attention. In this section, we seek comment on the application of the principles to different access platforms, including how, in what time frames or phases, and to what extent the principles should apply to non-wireline forms of Internet access, including, but not limited to, terrestrial mobile wireless, unlicensed wireless, licensed fixed wireless, and satellite.

155. Since the adoption of the *Internet Policy Statement* in 2005, alternative platforms for accessing the Internet have flourished, unleashing tremendous innovation and investment. In particular, wireless broadband Internet access has emerged as a technology that, from a consumer's perspective, now supports many of the same functions as DSL and cable modem service. For example, a consumer's laptop can be connected to the Internet through wireless or landline technologies. As noted above, the AT&T-BellSouth neutrality commitment extended to fixed WiMAX service.²⁶⁹ Wireless Internet access is provided through a variety of methods and technologies and is faster in most cases than dial up.²⁷⁰

156. Because of the rapid growth and increasing use of mobile wireless as a platform for broadband Internet access, we will examine in greater detail in the following parts the application of the principles to mobile broadband Internet access. We note as a threshold matter that wireless providers may offer a range of services—including traditional voice, short message service (SMS), and media messaging service (MMS)—that are not broadband Internet access services and thus are not included in the scope of the draft rules discussed above.²⁷¹

157. The manner in which the principles apply to mobile Internet access raises challenging questions, particularly with respect to the attachment of devices to the network and discrimination with regard to access to content, applications, and services, subject to reasonable network management.²⁷² The difficulty of the questions is in part due to the way in which devices, applications, and content are provided today in the mobile wireless context. Moreover, we note that mobile wireless networks are not as far along in the process of transitioning to IP-based traffic as wireline networks. We seek to analyze fully the implications of these principles for mobile network architectures and practices as well as how, in what time frames or phases, and to what extent they can be fairly and appropriately implemented. We undertake this analysis with a focus on promoting innovation, investment, research and development, competition, and consumer choice, in order to support a thriving Internet and robust mobile wireless broadband networks.

²⁶⁹ See *supra* para. 33.

²⁷⁰ The major mobile wireless broadband technologies currently in use offer typical download speeds of 400–700 kbps. *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 08-27, Thirteenth Report, 24 FCC Rcd 6185, 6254, 6256, paras. 135, 139 (WTB 2009) (*Wireless Market Conditions Thirteenth Report*).

²⁷¹ See *Wireless Broadband Classification Order*, 22 FCC Rcd 5901.

²⁷² See, e.g., Comments of CTIA, WT Docket No. 09-157, GN Docket No. 09-51 (Sept. 30, 2009) at 92 (“[I]t is critical that the Commission recognize that wireless broadband networks are fundamentally different than other broadband networks for many reasons.”); see also Skype S.A.R.L. May 15, 2007 Reply, RM-11361 at 15 (“Skype recognizes that there are technical differences between applying the Commission’s Broadband Policy Statement to wireless networks and applying it to wireline networks.”).

1. Emergence of Mobile Internet Access

158. Mobile wireless is now a key platform enabling consumers to access communications services. Since 2004, the number of mobile telephone subscribers has exceeded the number of landlines.²⁷³ More recently, mobile wireless has emerged as an important method of Internet access. The first 3G networks went into service in 2003,²⁷⁴ and today tens of millions of Americans access the Internet through mobile handheld devices or through personal computers or other devices equipped with wireless Internet capability.²⁷⁵ In the past four years, the number of mobile devices capable of high-speed Internet access grew from approximately 400,000 to more than 59 million by the end of June 2008.²⁷⁶ 3G networks have enabled speeds comparable to some fixed access networks, offering a robust Internet experience. And in the future, with new 3.5G and 4G networks, some consumers may use mobile wireless devices for all of their Internet access services.²⁷⁷ Simultaneously, new devices have emerged to take advantage of faster 3G network speeds. Many of today's smartphones (*e.g.*, Blackberry, iPhone, Palm Pre, and phones based on the Android or Windows Mobile platforms) are essentially handheld computers with fully featured Web browsers and the ability to run thousands of applications, many of which utilize the Internet, and more and more Americans are using these devices. Similarly, wireless modems are increasingly allowing laptops, netbooks, and desktop computers to connect to the Internet.

159. In evaluating the highly dynamic landscape for mobile wireless broadband Internet access, we recognize that there are technological, structural, consumer usage, and historical differences between mobile wireless and wireline/cable networks. In order to facilitate connection and quality of communications over these radio links, wireless networks employ technical controls over factors such as the frequency, time, and power of the phones' signals. The customer device communicates with the network using a specified technical interface.²⁷⁸ Moreover, cellular wireless networks are shared networks (as are some types of wireline networks), with limited resources typically shared among multiple users. Wireless networks must deal with particularly dynamic changes in the communications path due to radio interference and propagation effects such as signal loss with increasing distance of the wireless phone from the base stations, fading, multipath, and shadowing.

²⁷³ *Wireless Market Conditions Thirteenth Report*, 24 FCC Rcd 6185, 6280 para. 197 (184.7 million mobile telephone subscribers as of year end 2004, 263 million as of year end 2007); FCC LOCAL TELEPHONE COMPETITION: STATUS AS OF JUNE 30, 2008, tbl. 1 (July 2009) (177.7 million access lines as of year-end 2004, 158.4 million as of year-end 2007).

²⁷⁴ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 05-71, Tenth Report, 20 FCC Rcd 15908, 15952, para. 114 (2005).

²⁷⁵ NIELSEN MOBILE, *CRITICAL MASS: THE WORLDWIDE STATE OF THE MOBILE WEB 4* (JULY 2008), <http://www.nielsenmobile.com/documents/CriticalMass.pdf> (last visited Oct. 21, 2009) (an estimated 40.4 million Americans were active users of the mobile Internet as of May 2008); Press Release, comScore, *Mobile Internet Becoming a Daily Activity for Many* (Mar. 16, 2009), http://comscore.com/Press_Events/Press_Releases/2009/3/Daily_Mobile_Internet_Usage_Grows (last visited Oct. 21, 2009) (an estimated 63 million Americans accessed news and information over the Internet on mobile devices at least once during January 2009, 22 million on a daily basis).

²⁷⁶ FCC, *HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF JUNE 30, 2008*, tbl. 1 (July 2009).

²⁷⁷ See generally *Wireless Market Conditions Thirteenth Report*, 24 FCC Rcd at 6294–96, paras. 229–30.

²⁷⁸ Currently, there are two primary air interface standards for wireless networks Code Division Multiple Access (CDMA) and Global System for Mobile (GSM) communications. A CDMA device cannot communicate with a GSM network, and vice versa. Long Term Evolution (LTE) and Worldwide Interoperability for Microwave Access (WiMAX) are two competing air interface standards for 4G wireless services.

160. The mobile wireless industry structure has evolved differently as well. As part of the effort to promote widespread use of mobile wireless, service providers package devices with services, often subsidizing these devices, and in the process, they may work directly with handset manufacturers to develop the design of their end-user devices. Mobile broadband customers generally purchase their devices directly from the wireless provider, often at a significant discount pursuant to a long-term service contract. Moreover, as mobile broadband service has developed, it has been integrated with end-user devices that are used to deliver traditional voice service.²⁷⁹

2. Background of Wireless Open Platforms

161. In 2007, the Commission adopted a rule that required certain licensees to provide an open platform on their networks for devices and applications.²⁸⁰ Specifically, the open platform rule requires that Upper 700 MHz C-Block licensees must allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choice, so long as they meet all applicable regulatory requirements and do not cause harm to the network.²⁸¹ The Commission also prohibited all handset locking for Upper 700 MHz C-Block licensees.²⁸²

162. In addition, some service and equipment providers have opened their networks to certain third-party devices and/or applications.²⁸³ For example, in 2008, T-Mobile with Google unveiled the G1, the first Android device using Android's free, open-source mobile operating system platform, and since that time, T-Mobile has offered additional Android devices.²⁸⁴ Verizon Wireless established its Open Development Program, to allow its customers to use the devices and applications of their choice on its

²⁷⁹ In contrast, many (but not all) DSL modems provide only one function: Internet access. Increasingly, many cable modems also provide VoIP functionality. Similarly, most smartphones combine Internet capability with a non-Internet telephony capability as well as 2G data capabilities such as SMS.

²⁸⁰ See *700 MHz Second Report and Order*, 22 FCC Rcd at 15364–65, para. 205.

²⁸¹ *Id.* at 15365, para. 206.

²⁸² See *id.* at 15370–71, para. 222; 47 C.F.R. § 27.16(e). Handset locking is a practice whereby a mobile service provider uses a technological “lock” to prevent a subscriber’s handset from being transferred to another provider’s network during the term of the subscriber’s service contract.

²⁸³ T-Mobile’s Terms and Conditions state, “[y]ou may buy a Device from us or someone else, but it must, as solely determined by T-Mobile, be compatible with, and not potentially harm, our network.” T-Mobile Terms and Conditions, http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions (last visited Oct. 21, 2009). Similarly, Verizon Wireless, Sprint, and AT&T have each developed programs to allow for third-party devices and/or applications on their network. See, e.g., Press Release, Verizon, Verizon Developer Community Is Open For Business: Collaboration Key as Developers Connect on Mobile Applications for Verizon Customers; V CAST Apps to Launch this Year (July 28, 2009); Press Release, Sprint, Sprint Demonstrates ‘Open’ Leadership with New Programs for the Developer Community (Jun. 1, 2009); Press Release, AT&T, AT&T Launches “Apps Beta” Program to Advance Innovations in Applications, Issues Open Call to Developers (Apr. 2, 2009).

²⁸⁴ See, e.g., Stewart Wolpin, T-Mobile G1 Review, *Digital Trends* (Oct. 19, 2008), <http://reviews.digitaltrends.com/review/5637/t-mobile-g1-review> (last visited Oct. 21, 2009); MG Siegler, *T-Mobile Will Drop Its Second Android Phone, The myTouch 3G, This August For \$199*, *TechCrunch* (June 21, 2009), <http://www.techcrunch.com/2009/06/21/t-mobile-will-drop-its-second-android-phone-the-mytouch-3g-this-august-for-199/> (last visited Oct. 21, 2009); Press Release, T-Mobile, T-Mobile myTouch 3G Available in Stores Nationwide Beginning Today: The Power of Personalization Makes the Newest Android™ -Powered Device “100% You™” (Aug. 5, 2009).

network.²⁸⁵ Clearwire launched its CLEAR 4G WiMAX Innovation Network in Silicon Valley, a 4G WiMAX “sandbox” for application developers to use to develop wireless Internet applications.²⁸⁶ With the development of more advanced smartphone devices (such as the iPhone and the Palm Pre) over more robust wireless networks, many new and innovative applications have also been developed, which are typically offered to consumers through applications stores.²⁸⁷ These stores are often operated by wireless handset manufacturers and operating system developers, including Apple, Palm, and Research in Motion (for BlackBerry), and others are in development.²⁸⁸

3. Application of the Internet Principles to Wireless

a. Connection to the Network and Device Attachment

163. In the wireless Internet context, different devices may interconnect to the network in different ways. Smartphones have built-in radio capability, and typically may connect to the network following a registration procedure (*e.g.*, entering an authorization code) or by inserting a preregistered chip (*e.g.*, a subscriber identity module (SIM) card). Some laptop and netbook computers now have pre-installed radios and attach to the network in a manner similar to smartphones. Many laptops and other devices do not have built-in radios, but have a slot or port whereby a modem can be easily connected. Wireless interconnection is complicated by the fact that different operators utilize different network standards, which require devices to have a compatible “air interface” in order to operate. Further, as explained above, consumers typically purchase their wireless devices directly from their wireless providers (or their agents), and providers often restrict consumers from attaching certain third-party devices to their networks.

164. In the residential landline context, broadband providers typically provide a modem that attaches to the network, but allow users freely to interconnect devices locally to the modem through an Ethernet or WiFi connection. An analogous practice in the wireless context is known as “tethering,” whereby a wireless handset or device can be used as a modem to connect with other devices such as a laptop computer by wire or radio (*e.g.*, WiFi or Bluetooth). Similarly, some providers have begun to introduce “personal hotspot” devices (*e.g.*, the MiFi) that combine a 3G modem with a WiFi hub that can serve multiple devices. Tethering is not universally permitted by providers.²⁸⁹

²⁸⁵ Press Release, Verizon Wireless, Verizon Wireless To Introduce “Any Apps, Any Device” Option For Customers In 2008 (Nov. 27, 2007); *see also* Verizon Wireless, Open Development, <https://www22.verizon.com/opendev/> (last visited Oct. 21, 2009).

²⁸⁶ Press Release, Clearwire, Clearwire Launches CLEAR 4G WiMAX Innovation Network in Silicon Valley (Sept. 15, 2009).

²⁸⁷ CTIA notes that from May 2008 to 2009, at least six applications stores launched, with over 40,000 applications being made available to customers. *See* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, RM-11361, GN Docket No. 09-51, WC Docket No. 07-52, at 1 (filed May 12, 2009) (CTIA May 12, 2009 *Ex Parte*).

²⁸⁸ *See* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, RM-11361, WT Docket No. 09-66, at 4 (filed July 15, 2009) (noting the growth of wireless software applications and the development of applications stores from entities such as Palm, Nokia, and Windows Mobile, and stating that “there are now more than 70,000 applications available to wireless consumers”); *see also* CTIA May 12, 2009 *Ex Parte* at 12–14.

²⁸⁹ According to the nationwide providers’ terms of service, some of these providers prohibit tethering unless the customer has signed up for a particular data plan and/or uses certain devices for tethering. *See* T-Mobile, Terms and Conditions, http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions; Verizon Wireless Customer Agreement, http://www.verizonwireless.com/b2c/globalText?textName=CUSTOMER_AGREEMENT&jspName=footer/custo (continued . . .)

165. Unlicensed wireless devices can generally attach to a local-area or personal-area network without requiring the network owner (typically a consumer) to test for whether the device is non-harmful, since this would be impractical. Typically this is accomplished by using industry standard interfaces such as a WiFi connection. We note that private sector certification programs have been established to ensure compatibility with the standards. For example, in order to advertise a product as WiFi compliant the device must undergo third-party testing in accordance with a program established by the WiFi Alliance.

166. In this context, we ask how, in what time frames or phases, and to what extent the “any device” rule should apply to mobile wireless broadband Internet access. In particular, we seek concrete data and specific examples that will inform our consideration of the issue. Should we require a mobile broadband Internet access service provider to allow users to attach any device with a compatible air interface directly to its network?²⁹⁰ If so, what procedures may providers use to prevent harm to the network? Who should ensure that devices are non-harmful: the providers themselves, third-party organizations, industry associations/laboratories, or the Commission? Should we allow providers to satisfy the device-attachment principle by providing wireless modems or SIM cards that could be easily inserted into end-user devices?

167. Should we require providers to allow “tethering” as a form of device interconnection? If we required wireless providers to permit tethering, what impact would that have on wireless network congestion, and what reasonable network management measures should providers be allowed to take to ensure that their networks can support tethering? Alternatively, should a tethering requirement be sufficient to satisfy the “any device” requirement in the wireless context?

168. In the interest of ensuring that the application of the “any device” rule is fair and appropriate, we also seek comment on realistic and reasonable time frames or phases for applying this rule to mobile wireless broadband Internet access services.

169. We note that the “any device” rule proposed in this Notice would differ from the rules that the Commission adopted for Upper 700 MHz C Block licensees in several respects. For example, the rule proposed in this Notice would not necessarily prohibit the practice of “handset locking” (*i.e.*, preventing a subscriber from transferring a handset to another provider’s network during the time the contract with the subscriber is in place), which was explicitly prohibited in the rules applicable to the Upper 700 MHz C Block licensees.²⁹¹ Further, the “any device” rule proposed in this Notice, as well as the “any application” rule proposed herein, would require a provider of *broadband Internet access service* to allow users to connect to the provider’s network their choice of lawful devices that do not harm the network and to run the lawful applications of the users’ choice. In contrast, the rules the Commission adopted for Upper 700 MHz C Block licensees, which have been in effect since 2007, require licensees offering *any* service on Upper 700 MHz C Block spectrum, without limitation to broadband internet access service, to allow use of the devices and applications of the user’s choice on the licensee’s C Block network.²⁹²

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merAgreement.jsp (last visited Oct. 21, 2009); Sprint, Terms and Conditions, http://nextelonline.nextel.com/en/legal/legal_terms_privacy_popup.shtml#2 (last visited Oct. 21, 2009); AT&T, Plan Terms, Wireless Data Terms and Conditions, <http://www.wireless.att.com/cell-phone-service/legal/plan-terms.jsp#data> (last visited Oct. 21, 2009).

²⁹⁰ See TIM WU, WIRELESS NET NEUTRALITY: CELLULAR *CARTERPHONE* AND CONSUMER CHOICE IN MOBILE BROADBAND (New America Foundation, Working Paper No. 17, 2007), http://www.newamerica.net/files/WorkingPaper17_WirelessNetNeutrality_Wu.pdf.

²⁹¹ See *700 MHz Second Report and Order*, 22 FCC Rcd at 15370–71, para. 222; 47 C.F.R. § 27.16(e).

²⁹² See *700 MHz Second Report and Order*, 22 FCC Rcd at 15365, para. 206; 47 C.F.R. § 27.16(b).

170. In addition, we note that rural wireless carriers have raised an additional issue that relates to devices, asking the Commission to address exclusive handset arrangements between wireless service providers and device manufacturers.²⁹³ We do not view the open Internet rules proposed here as directly related to handset exclusivity, and we do not intend to address that issue in this proceeding, but rather will consider it separately.

b. Application of Nondiscrimination with Respect to Access to Content, Applications, and Services, Subject to Reasonable Network Management

171. Application of a nondiscrimination principle raises important questions in wireless, given the provision of voice, SMS/MMS, and Internet service through a single device, typically sold by the same network operator.²⁹⁴ We seek comment on how, in what time frames or phases, and to what extent the prohibition on discrimination, subject to reasonable network management, should be administered for wireless services, including specific examples and data regarding practices. Would it be desirable to treat different devices and networks differently? Should the principle apply in the same way to an iPhone connected to a 3G network and to a laptop connected to a modem that is connected to a wireless mesh network? How should this principle apply in the context of 4G networks capable of supporting voice, video, and data services on a converged platform architecture? We also seek comment on time frames or phases that would facilitate fair and appropriate application of the nondiscrimination principle to mobile wireless broadband Internet access services.

172. With respect to the identification of reasonable network management practices for mobile broadband, we note that each provider has a finite amount of spectrum available to it. The users in a cell share the spectrum at any given time and the demands on capacity can vary widely depending on such factors as the number of users within that cell at any given time and the applications they are using. Moreover, while all networks must be designed to deal with various factors that can affect performance, wireless networks must be designed to deal with wide variations in signal levels across the service area as well as interference from other devices. In order to maximize utility to all users in a given cell sector, certain basic technical “rules of the road” are critical. What implications do these technical characteristics have for practices that might be considered reasonable network management in the wireless context? Further, for a given application, wireless networks are more sensitive to user behavior than wireline networks, so capacity management is a constant concern of wireless engineers. Bandwidth-intensive Internet services already create challenges for wireless networks, and these challenges are likely to increase, although the effects may be ameliorated by new technology, investment, innovation in business models, and/or additional spectrum. On the other hand, for the most bandwidth-intensive service today—streaming video—many wireless users view video content on smaller screens, which requires less bandwidth than typical video services consumed over a wireline Internet connection.

173. In what way do these wireless characteristics affect what kinds of network management practices are or are not reasonable? Are there particular wireless network management practices that should be identified by the Commission as reasonable? For example, are there any circumstances in which it could be reasonable for a wireless network to block video applications because they consume too much capacity? What about third-party VoIP applications or peer-to-peer applications?

174. We further seek comment on what access to applications means in the mobile wireless context. Does the quality of a user’s experience with an application vary depending on whether the

²⁹³ See *Wireless Telecommunications Bureau Seeks Comment on Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers*, RM-11497, Public Notice, 23 FCC Rcd 14873 (2008).

²⁹⁴ See *supra* sections IV.H.1–2.

application is downloaded onto the user's device or whether it is accessed in the cloud using the device's Web browser?

I. Enforcement

175. In this Notice, we propose to codify six principles that will govern the conduct of broadband Internet access service providers, and to enforce those rules on a case-by-case basis through adjudication. The Commission has authority to enforce its rules. Section 503(b) of the Act authorizes the Commission to issue citations and impose forfeiture penalties for violations of the Commission's rules.²⁹⁵ The Commission may initiate an enforcement action on its own motion²⁹⁶ or in response to a complaint filed by an outside party.²⁹⁷ We note that in the *Adelphia/Time Warner/Comcast Order*, the Commission invited parties to file complaints if evidence arose that Comcast was willfully blocking or degrading access to Internet content.²⁹⁸ And in the *Comcast Network Management Practices Order*, we addressed a complaint concerning alleged blocking or degrading of Internet content.²⁹⁹

176. We seek comment on whether the Commission should adopt procedural rules specifically governing complaints involving alleged violations of any Internet principles we codify in our regulations. Should the Commission adopt formal complaint procedures for alleged violations of its open Internet rules? If so, what process should govern such complaints? Would any of the Commission's existing rules, such as the rules governing formal complaints under section 208 of the Act³⁰⁰ or the rules governing complaints related to cable service,³⁰¹ provide a suitable model in developing new procedural rules for open Internet complaints? Should the procedural rules differ depending on characteristics of the defendant (e.g., common carrier, cable provider)? Are there statutory limits on the scope of relief that the Commission may award in a formal complaint proceeding involving a violation of any open Internet rules? For example, may the Commission award damages to a complainant? If so, under what circumstances? What other issues concerning enforcement should the Commission consider? We invite comment.

J. Technical Advisory Process

177. We recognize that our decisions in this rulemaking must reflect a thorough understanding of current technology and future technological trends. To ensure that we have this understanding, the Chief of the Commission's Office of Engineering & Technology will create an inclusive, open, and transparent process for obtaining the best technical advice and information from a broad range of engineers.

V. PROCEDURAL MATTERS

178. *Ex Parte Presentations*. The rulemaking this Notice initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.³⁰² Persons making

²⁹⁵ 47 U.S.C. § 503(b).

²⁹⁶ *Id.* at § 403.

²⁹⁷ *See, e.g.*, 47 C.F.R. § 1.41 (authorizing the filing of informal complaints).

²⁹⁸ *Adelphia/Time Warner/Comcast Order*, 21 FCC Rcd 8203, 8298, para. 220 (2006).

²⁹⁹ *Comcast Network Management Practices Order*, 23 FCC Rcd at 13032–33, paras. 10–11.

³⁰⁰ 47 C.F.R. § 1.711 *et seq.*

³⁰¹ 47 C.F.R. § 76.7; *see also* 47 C.F.R. § 76.1003 (program access complaints).

³⁰² 47 C.F.R. §§ 1.200 *et seq.*

oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented generally is required.³⁰³ Other requirements pertaining to oral and written presentations are set forth in section 1.1206(b) of the Commission's rules.³⁰⁴

179. *Comment Filing Procedures.* Pursuant to sections 1.415 and 1.419 of the Commission's rules, interested parties may file comments and reply comments regarding the Notice on or before the dates indicated on the first page of this document.³⁰⁵ **All filings related to this Notice of Proposed Rulemaking should refer to GN Docket No. 09-191 and WC Docket No. 07-52. Further, we strongly encourage parties to develop responses to this Notice that adhere to the organization and structure of this Notice.** Comments may be filed: (1) using the Commission's Electronic Comment Filing System (ECFS), (2) using the Federal Government's eRulemaking Portal,³⁰⁶ (3) by filing paper copies, or (4) by posting comments and ideas on the OpenInternet blog or on <http://openinternet.ideascale.com>.

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
- **ECFS filers** must transmit one electronic copy of the comments for GN Docket No. 09-191, WC Docket No. 07-52. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.
- **Paper Filers:** Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554.
- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of *before* entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12th Street, S.W., Washington D.C. 20554.

³⁰³ See 47 C.F.R. § 1.1206(b)(2).

³⁰⁴ 47 C.F.R. § 1.1206(b).

³⁰⁵ 47 C.F.R. §§ 1.415, 1.419.

³⁰⁶ See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

- **Blog Filers:** In addition to the usual methods for filing electronic comments, the Commission is allowing comments, reply comments, and ex parte comments in this proceeding to be filed by posting comments on <http://blog.openinternet.gov> and on <http://openinternet.ideascale.com>. Accordingly, persons wishing to examine the record in this proceeding should examine the record on ECFS, <http://blog.openinternet.gov>, and <http://openinternet.ideascale.com>. Although those posting comments on the blog may choose to provide identifying information or may comment anonymously, anonymous comments will not be part of the record in this proceeding and accordingly will not be relied on by the Commission in reaching its conclusions in this rulemaking. The Commission will not rely on anonymous postings in reaching conclusions in this matter because of the difficulty in verifying the accuracy of information in anonymous postings. Should posters provide identifying information, they should be aware that although such information will not be posted on the blog, it will be publicly available for inspection upon request.

180. Parties should send a copy of their filings to the Competition Policy Division, Wireline Competition Bureau, Federal Communications Commission, Room 5-C140, 445 12th Street, S.W., Washington, D.C. 20554, or by e-mail to cpdcopies@fcc.gov. Parties shall also serve one copy with the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI), Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (202) 488-5300, or via e-mail to fcc@bcpiweb.com.

181. Documents in GN Docket 09-191 and WC Docket No. 07-52 will be available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th Street S.W., Room CY-A257, Washington, D.C. 20554. The documents may also be purchased from BCPI, telephone (202) 488-5300, facsimile (202) 488-5563, TTY (202) 488-5562, e-mail fcc@bcpiweb.com.

182. *Initial Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document.³⁰⁷ The IRFA is set forth in Appendix C. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided on or before the dates indicated on the first page of this Notice.

183. *Paperwork Reduction Act.* This document contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995.³⁰⁸ In addition, pursuant to the Small Business Paperwork Relief Act of 2002,³⁰⁹ we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."³¹⁰

184. *Accessible Formats.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format) or to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CART, etc.), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice) or (202) 418-0432 (TTY).

³⁰⁷ See 5 U.S.C. § 603.

³⁰⁸ Pub. L. No. 104-13.

³⁰⁹ Pub. L. No. 107-198.

³¹⁰ See 44 U.S.C. § 3506(c)(4).

VI. ORDERING CLAUSES

185. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 4(i)–(j), 201(b), 230, 257, 303(r), and 503 of the Communications Act of 1934, as amended, and section 706 of the Telecommunications Act of 1996, as amended, 47 U.S.C. §§ 151, 152, 154(i)–(j), 201(b), 230, 257, 303(r), 503, 1302, this Notice of Proposed Rulemaking IS ADOPTED.

186. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Draft Proposed Rules for Public Input

Part 8 of Title 47 of the Code of Federal Regulations is added as follows:

PART 8 – PRESERVING THE OPEN INTERNET

Sec.

- 8.1 Purpose.
- 8.3 Definitions.
- 8.5 Content.
- 8.7 Applications and Services.
- 8.9 Devices.
- 8.11 Competitive Options.
- 8.13 Nondiscrimination.
- 8.15 Transparency.
- 8.17 Reasonable Network Management.
- 8.19 Law Enforcement.
- 8.21 Public Safety and Homeland and National Security.
- 8.23 Other Laws.

AUTHORITY: 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 230, 257, 303(r), 503, 1302.

§ 8.1 Purpose and Scope.

The purpose of these rules is to preserve the open Internet. These rules apply to broadband Internet access service providers only to the extent they are providing broadband Internet access services.

§ 8.3 Definitions.

Internet. The system of interconnected networks that use the Internet Protocol for communication with resources or endpoints reachable, directly or through a proxy, via a globally unique Internet address assigned by the Internet Assigned Numbers Authority.

Broadband Internet access. Internet Protocol data transmission between an end user and the Internet. For purposes of this definition, dial-up access requiring an end user to initiate a call across the public switched telephone network to establish a connection shall not constitute broadband Internet access.

Broadband Internet access service. Any communication service by wire or radio that provides broadband Internet access directly to the public, or to such classes of users as to be effectively available directly to the public.

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.

§ 8.5 Content.

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.

§ 8.7 Applications and Services.

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.

§ 8.9 Devices.

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.

§ 8.11 Competitive Options.

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.

§ 8.13 Nondiscrimination.

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

§ 8.15 Transparency.

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.

§ 8.19 Law Enforcement.

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.

§ 8.21 Public Safety and Homeland and National Security.

Nothing in this part supersedes any obligation a provider of broadband Internet access service may have—or limits its ability—to deliver emergency communications or to address the needs of public safety or national or homeland security authorities, consistent with applicable law.

§ 8.23 Other laws.

Nothing in this part is intended to prevent a provider of broadband Internet access service from complying with other laws.

APPENDIX B

List of Commenters

Broadband Industry Practices, WC Docket No. 07-52, Notice of Inquiry, 22 FCC Rcd 7894 (2007).

<u>Commenter</u>	<u>Abbreviation</u>
Asian American Justice Center	AAJC
American Cable Association	ACA
American Consumer Institute	ACI
American Conservative Union	ACU
Ad Hoc Telecom Manufacturer Coalition	Ad Hoc Coalition
American Homeowners Grassroots Alliance	AHGA
American Library Association	ALA
Alexicon Telecommunications Consulting	Alexicon
Americans for Tax Reform	ATR
AT&T, Inc.	AT&T
Joel Atyas	Atyas
Frank Barton	Barton
Robert Berger	Berger
Black Men of America	BMOA
Bridgecom, Broadview, Cavalier	Bridgecom et al.
BT Americas Inc.	British Telecom
Citizens Against Government Waste	CAGW
Consumers for Cable Choice	CCC
Computer & Communications Industry Association	CCIA
Center for Democracy and Technology	CDT
Consumer Electronics Association	CEA
Competitive Enterprise Institute	CEI
Consumer Federation of America, Consumers Union, and Free Press	CFA et al.
Center for Individual Freedom	CIF
Mary Cole	Cole
Clergy Strategic Alliances	CSA
CTIA — The Wireless Association	CTIA
Dominican American National Roundtable	DANR
Data Foundry	Data Foundry
Alan Davis	Davis
DivX, Inc.	DivX
Bernard Duffy	Duffy
Employment and Career Channel	E&CC
EarthLink and New Edge Network	EarthLink and New Edge
Embarq	Embarq
Frontiers of Freedom Institute	FFI
FreedomWorks	FreedomWorks
Fiber-to-the-Home Council	FTTH Council
Google, Inc.	Google
Hands off the Internet	Hands off the Internet
Health Tech Strategies	Health Tech
Hispanic Information & Telecommunications Network Inc.	HITN
Hispanic Technology and Telecommunications Partnership	HTTP
Internet Content and Service Provider Coalition	ICSPC

Internet Freedom Coalition	Internet Freedom Coalition
IOActive	IOActive
Institute for Policy Innovation	IPI
Information Technology Industry Council	ITIC
Independent Women's Forum	IWF
Japanese American Citizens League	JACL
Johnson	Johnson
Labor Council for Latin American Advancement	LCLAA
Leadership Education for Asian Pacifics	LEAP
Ryan Lem	Lem
Aaron Lockhart	Lockhart
League of United Latin American Citizens	LULAC
Norman McCracken	McCracken
Media Institute	Media Institute
Mercatus Center	Mercatus Center
Motion Picture Association of America	MPAA
Geddes Munson	Munson
National Association for the Advancement of Colored People	NAACP
National Association of Latino Independent Producers	NALIP
National Association of State Utility Consumer Advocates	NASUCA
National Association of Manufacturers	Nat'l Ass'n of Manufacturers
National Association of Neighborhoods	Nat'l Ass'n of Neighborhoods
National Grange of the Order of Patrons of Husbandry	National Grange
National Association of Telecommunications Officers and Advisors, National Association of Counties, National League of Cities	NATOA et al.
NBC Universal	NBC
National Black Chamber of Commerce	NBCC
National Cable & Telecommunications Association	NCTA
Nebraska Rural Independent Companies	Nebraska Rural
New Jersey Division of Rate Counsel	NJ Rate Counsel
National Telecommunications Cooperative Association	NTCA
National Urban League	NUL
New York State Department of Public Service	New York Dep't
Oasis Institute	Oasis
Open Internet Coalition	Open Internet Coalition
Progress and Freedom Foundation	PFF
Packet Management System Manufacturers	PMSM
Michael Pope	Pope
Providea	Providea
Nick Psaltos	Psaltos
Qwest Communications	Qwest
RainbowPUSH Coalition	RainbowPUSH
SBE Council	SBE Council
SeniorNet	SeniorNet
Christopher Siebert	Siebert
Satellite Industry Association	SIA
Mari Silbey	Silbey
James A. Small	Small
Sprint Nextel Corporation	Sprint
Alexander R. Tambascia	Tambascia
Telehealth Alliance of Oregon	TAO
TelecomView	TelecomView

Jill Long Thompson	Thompson
Telecommunications Industry Association	TIA
Time Warner, Inc.	Time Warner
Steven Titch	Titch
T-Mobile	T-Mobile
University of Arkansas for Medical Sciences	UAMS
U. S. Chamber of Commerce	US Chamber of Commerce
United State Hispanic Chamber of Commerce	USHCC
United States Internet Industry Association	USIIA
United States Telecom Association	USTA
Verizon	Verizon
Video Access Alliance	Video Access
Washington Public Hospital Districts	Washington PHD
Wireless Communications Association International, Inc.	WCAI
Women Impacting Public Policy	WIPP
Brendan Younger	Younger

Reply Commenter

Akamai Technologies, Inc.
 Alcatel-Lucent
 AT&T, Inc.
 Computer & Communications Industry Association
 Center for Democracy & Technology
 Cisco Systems, Inc.
 Computing Technology Industry Association
 Center for Creative Voices in Media
 CTIA — The Wireless Association
 Geoff Daily
 Data Foundry, Inc.
 Sens. Byron Dorgan & Olympia Snowe
 Kristie Hager
 Hands off the Internet
 Hance Haney
 Hughes Network Systems, LLC
 Internet Freedom Coalition
 Shivkumar Kalyanaraman & Murat Yuksel
 The Regulatory Studies Program of the Mercatus Center
 at George Mason
 National Association of State Utility Consumer Advocates
 National Cable & Telecom Association
 Nebraska Rural Independent Companies
 The New Jersey Division of Rate Counsel
 Open Internet Coalition
 Public Knowledge et al.
 Qwest Communications International, Inc.
 United States Internet Industry Association
 United States Telecom Association
 Verizon & Verizon Wireless
 Wisconsin Department of Public Instruction

Abbreviation

Akamai
 Alcatel-Lucent
 AT&T
 CCIA
 CDT
 Cisco
 Computing Ass'n
 Creative Voices
 CTIA
 Daily
 Data Foundry
 Dorgan & Snowe
 Hager
 Hands off the Internet
 Haney
 Hughes
 Internet Freedom Coalition
 Kalyanaraman & Yuksel
 Mercatus Center

 NASUCA
 NCTA
 Nebraska Rural
 NJ Rate Counsel
 Open Internet Coalition
 Public Knowledge et al.
 Qwest
 USIIA
 USTA
 Verizon
 Wisconsin Dep't

Broadband Industry Practices, WC Docket No. 07-52, Comment Sought on Petition for Declaratory Ruling Regarding Internet Management Policies, Public Notice, 23 FCC Rcd 340 (WCB 2008).

<u>Commenter</u>	<u>Abbreviation</u>
American Homeowners Grassroots Alliance	AHGA
American Library Association	ALA
AT&T Inc.	AT&T
Richard Bennett	Bennett
Computer & Communications Industry Association	CCIA
Center for Democracy & Technology	CDT
Competitive Enterprise Institute	CEI
Comcast Corporation	Comcast
CTIA — The Wireless Association	CTIA
Distributed Computing Industry Association	DCIA
Discovery Institute	Discovery Institute
Embarq	Embarq
Dean Fox	Fox
Free Press; Public Knowledge; Media Access Project; Consumer Federation of America; Consumers Union; New America Foundation; Participatory Culture Foundation	Free Press
Free State Foundation	Free State
Frontier Communications	Frontier
Fiber-to-the-Home Council	FTTH Council
David Gerisch	Gerisch
Global Crossing North America, Inc.	Global Crossing
Hands off the Internet	Hands off the Internet
Health Tech Strategies, LLC	Health Tech
Institute for Policy Innovation	IPI
Information Technology Association of America	ITAA
Information Technology and Innovation Foundation	ITIF
Independent Telephone & Telephone Communications Alliance	ITTA
Danny Ray Jackson	Jackson
Laurence Brett Glass d/b/a LARIAT	LARIAT
Labor Council for Latin American Advancement	LCLAA
Nickolaus E. Leggett	Leggett
Brad Lindaas et al., Northwestern University Students for Net Neutrality	Lindaas et al.
Curtis L. Lowery, M.D., University of Arkansas for Medical Sciences	Lowery
National Association of State Utility Consumer Advocates	NASUCA
National Association of Realtors	Nat'l Ass'n of Realtors
National Grange of the Order of Patrons of Husbandry	National Grange
National Association of Telecommunications Officers and Advisors	NATOA
NBC Universal Inc.	NBC
National Black Chamber of Commerce	NBCC
National Cable and Telecommunications Association	NCTA
National Public Safety Telecommunications Council	NPSTIC
National Telecommunications Cooperative Association	NTCA
New York Public Service Commission	NY Commission
The OASIS Institute	OASIS
Organization for the Promotion and Advancement of Small Telecommunications Companies	OPASTCO

Open Internet Coalition	Open Internet Coalition
George Ou	Ou
Part-15 Organization	Part-15.ORG
Progress and Freedom Foundation	PFF
Qwest Communications International, Inc.	Qwest
Recording Industry Association of America	RIAA
SafeMedia Corporation	SafeMedia
Small Business and Entrepreneurship Council	SBE Council
Christopher Soghoian	Soghoian
Sony Electronics, Inc.	Sony
Telecommunication Industry Association	TIA
Time Warner Cable, Inc.	Time Warner
Steven Titch, The Reason Foundation	Titch
Michael Trausch	Trausch
Joseph Tucek	Tucek
U.S. Chamber of Commerce	US Chamber of Commerce
United States Internet Industry Association	USIIA
United States Telecom Association	USTelecom
Verizon and Verizon Wireless	Verizon
Vonage Holdings Corp.	Vonage
Vuze, Inc.	Vuze
Wireless Communications Association International, Inc.	WCA
Women Impacting Public Policy	WIPP

Reply Commenter

Aaron G.
Advanced Communications Law & Policy Institute
at New York Law School
Ad Hoc Telecom Manufacturer Coalition
Beth Ahern
American Legislative Exchange Council,
Telecommunications & Information Technology Task Force
AT&T Inc.
Richard Bennett
BeSafe Technologies Inc.
Computer & Communications Industry Association
Center for Democracy & Technology
Consumer Federation of America and Consumers Union
Christian Coalition of America; the CP80 Foundation;
Enough is Enough; and Stop Child Predators
Cisco Systems, Inc.
Comcast Corporation
CTIA – The Wireless Association
Electronic Frontier Foundation
Free Press; Public Knowledge; Media Access Project;
Consumer Federation of America; Consumers Union;
New America Foundation; Participatory Culture Foundation
Hands Off the Internet
Sean Kass
Motion Picture Association of America
National Association of State Utility Consumer Advocates

Abbreviation

Aaron G.
ACLPI

Ad Hoc Coalition
Ahern
ALEC

AT&T
Bennett
BeSafe
CCIA
CDT
CFA/CU
Christian Coalition et al.

Cisco
Comcast
CTIA
EFF
Free Press

Hands Off the Internet
Kass
MPAA
NASUCA

The National Grange of the Order of Patrons of Husbandry	National Grange
NBC Universal, Inc.	NBC
National Black Chamber of Commerce; Labor Council for Latin American Advancement; Latinos in Information Sciences and Technology Association; League of Rural Voters; National Black Justice Coalition; National Council of Women's Organizations; and National Congress of Black Women	NBCC Coalition
New Jersey Division of Rate Counsel	NJ Rate Counsel
Barry Payne	Payne
The Progress & Freedom Foundation	PFF
Recording Industry Association of America	RIAA
Songwriters Guild of America	SGA
Sprint Nextel Corporation	Sprint Nextel
Anthony Tarsia	Tarsia
Telecommunications for the Deaf and Hard of Hearing, Inc.	TDI
S. Michael Telford	Telford
Telecommunications Industry Association	TIA
Time Warner Cable Inc.	Time Warner
Robert M. Topolski	Topolski
U.S. Chamber of Commerce	US Chamber of Commerce
U.S. Distance Learning Association	USDLA
United States Hispanic Leadership Institute	USHLI
United States Telecom Association	USTelecom
Verizon and Verizon Wireless	Verizon
Viacom Inc.	Viacom
Vonage Holdings Corp.	Vonage
Vuze, Inc.	Vuze

APPENDIX C

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities from the policies and rules proposed in this Notice of Proposed Rulemaking (Notice). The Commission requests written public comment on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided on the first page of the Notice. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. Today's Internet is shaped by a legacy of openness and transparency that has been critical to its success as an engine for creativity, innovation, and economic growth. The Notice seeks comment on a number of issues relating to preserving this openness and transparency. In the Notice the Commission proposes draft language to codify the four principles the Commission articulated in the *Internet Policy Statement*, that providers must allow consumers to:

access the lawful Internet content of their choice[;] . . . run applications and use services of their choice, subject to the needs of law enforcement[;] . . . connect their choice of legal devices that do not harm the network[; and] . . . [benefit from] competition among network providers, application and service providers, and content providers.⁴

3. The Commission also proposes draft language to codify a fifth principle that would require a broadband Internet access service provider to treat lawful content, applications, and services in a nondiscriminatory manner and draft language to codify a sixth principle that would require a broadband Internet access service provider to 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 rulemaking.

4. The Notice proposes draft language to make clear that the principles would be subject to reasonable network management and would not supersede any obligation a broadband Internet access service provider may have—or limit its ability—to deliver emergency communications or to address the needs of law enforcement, public safety, or national or homeland security authorities, consistent with

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601–12, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ *Id.*

⁴ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings; Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14986, 14987–88, para. 4 (2005) (*Internet Policy Statement*).

applicable law. The draft rules do not prohibit broadband Internet access service providers from taking reasonable action to prevent the transfer of unlawful content, such as the unlawful distribution of copyrighted works. Nor are the draft rules intended to prevent a provider of broadband Internet access service from complying with other laws.

5. The Notice seeks comment on defining a category of managed or specialized services, how to define such services, and what principles or rules, if any, should apply to them. The Notice also seeks comment on how, to what extent, and when the principles should apply to wireless broadband Internet access service, whether such access is obtained via terrestrial mobile wireless, unlicensed wireless, licensed fixed wireless, or satellite. Finally, the Notice seeks comment on the enforcement procedures that the Commission should use to ensure compliance with the proposed principles.

B. Legal Basis

6. The legal basis for any action that may be taken pursuant to the Notice is contained in sections 1, 2, 4(i)–(j), 201(b), 230, 257, 303(r), and 503 of the Communications Act of 1934, as amended, and section 706 of the Telecommunications Act of 1996, as amended, 47 U.S.C. §§ 151, 152, 154(i)–(j), 201(b), 230, 257, 303(r), 503, 1302.

C. Description and Estimate of the Number of Small Entities to Which the Rules Would Apply

7. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein.⁵ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁶ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁷ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁸

1. Total Small Entities

8. Our proposed action, if implemented, may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards.⁹ First, nationwide, there are a total of approximately 27.2 million small businesses, according to the SBA.¹⁰ In addition, a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”¹¹ Nationwide, as

⁵ 5 U.S.C. § 604(a)(3).

⁶ 5 U.S.C. § 601(6).

⁷ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

⁸ 15 U.S.C. § 632.

⁹ See 5 U.S.C. §§ 601(3)–(6).

¹⁰ See SBA, Office of Advocacy, “Frequently Asked Questions,” <http://web.sba.gov/faqs> (last visited Oct. 21, 2009).

¹¹ 5 U.S.C. § 601(4).

of 2002, there were approximately 1.6 million small organizations.¹² Finally, the term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹³ Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.¹⁴ We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.”¹⁵ Thus, we estimate that most governmental jurisdictions are small.

2. Internet Access Service Providers

9. The actions proposed in the Notice would apply to broadband Internet access service providers. In 2007, the SBA recognized two new small business, economic census categories. They are (1) Internet Publishing and Broadcasting and Web Search Portals¹⁶ and (2) All Other Information Services.¹⁷ However, census data do not yet exist that may be used to calculate the number of small entities that fit these definitions. Therefore, we will use the prior definition of Internet Service Providers (ISPs) in order to estimate numbers of potentially-affected small business entities.

10. The 2007 Economic Census places these providers, which includes voice over Internet protocol (VoIP) providers, in the category of All Other Telecommunications.¹⁸ The SBA small business size standard for such firms is: those having annual average receipts of \$25 million or less.¹⁹ The most current Census Bureau data on such entities, however, are the 2002 data for the previous census category²⁰ called Internet Service Providers. The 2002 data show that there were 2,529 such firms that operated for the entire year.²¹ Of those, 2,437 firms had annual receipts of under \$10 million and an additional 47 firms had receipts of between \$10 million and \$24,999,999.²² Consequently, we estimate that the majority of ISP firms are small entities that may be affected by our action.

11. The ISP industry has changed dramatically since 2002. The 2002 data cited above therefore may include entities that no longer provide Internet access service and may exclude entities that now provide broadband Internet access service. To ensure that this IRFA describes the universe of small entities that the proposals in the Notice may affect, we discuss in turn several different types of entities that may be providing broadband Internet access service. We note that, although we have no specific

¹² INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2002).

¹³ 5 U.S.C. § 601(5).

¹⁴ U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2006, Section 8, page 272, tbl. 415.

¹⁵ We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2006, section 8, page 273, tbl. 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

¹⁶ 13 C.F.R. § 121.201, NAICS code 519130 (establishing a \$500,000 revenue ceiling).

¹⁷ 13 C.F.R. § 121.201, NAICS code 519190 (establishing a \$7 million revenue ceiling).

¹⁸ U.S. Census Bureau, 2007 NAICS Definitions, “517919 All Other Telecommunications,” <http://www.census.gov/naics/2007/def/ND517919.HTM#N517919> (last visited Oct. 21, 2009).

¹⁹ 13 C.F.R. § 121.201, NAICS code 517919 (updated for inflation in 2008).

²⁰ U.S. Census Bureau, “2002 NAICS Definitions: 518111 Internet Service Providers,” <http://www.census.gov/epcd/naics02/def/NDEF518.HTM> (last visited Oct. 21, 2009).

²¹ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” tbl. 4, NAICS code 518111 (rel. Nov. 2005).

²² An additional 45 firms had receipts of \$25 million or more.

information on the number of small entities that provide broadband Internet access service over unlicensed spectrum, we include these entities in our Initial Regulatory Flexibility Analysis.

3. Wireline Providers

12. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²³ According to Commission data,²⁴ 1,311 carriers have reported that they are engaged in the provision of incumbent local exchange services. Of these 1,311 carriers, an estimated 1,024 have 1,500 or fewer employees and 287 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our proposed action.

13. *Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²⁵ According to Commission data,²⁶ 1005 carriers have reported that they are engaged in the provision of either competitive access provider services or competitive local exchange carrier services. Of these 1005 carriers, an estimated 918 have 1,500 or fewer employees and 87 have more than 1,500 employees. In addition, 16 carriers have reported that they are “Shared-Tenant Service Providers,” and all 16 are estimated to have 1,500 or fewer employees. In addition, 89 carriers have reported that they are “Other Local Service Providers.” Of the 89, all have 1,500 or fewer employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and other local service providers are small entities that may be affected by our proposed action.

14. We have included small incumbent LECs in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”²⁷ The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.²⁸ We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

²³ 13 C.F.R. § 121.201, NAICS code 517110.

²⁴ FCC, WIRELINE COMPETITION BUREAU, INDUSTRY ANALYSIS AND TECHNOLOGY DIVISION, TRENDS IN TELEPHONE SERVICE, tbl. 5.3, Page 5-5 (Aug. 2008) (TRENDS IN TELEPHONE SERVICE). This source uses data that are current as of November 1, 2006.

²⁵ 13 C.F.R. § 121.201, NAICS code 517110.

²⁶ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

²⁷ 5 U.S.C. § 601(3).

²⁸ Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (filed May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b).

15. *Interexchange Carriers*. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²⁹ According to Commission data,³⁰ 300 carriers have reported that they are engaged in the provision of interexchange service. Of these, an estimated 268 have 1,500 or fewer employees and 32 have more than 1,500 employees. Consequently, the Commission estimates that the majority of IXC are small entities that may be affected by our proposed action.

16. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.³¹ According to Commission data, 28 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 27 have 1,500 or fewer employees and one has more than 1,500 employees.³² Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by our proposed action.

4. Wireless Providers

17. The broadband Internet access service provider category covered by this Notice may cover multiple wireless firms and categories of regulated wireless services. Thus, to the extent the wireless services listed below are used by wireless firms for broadband Internet access services, the proposed actions may have an impact on those small businesses as set forth above and further below. In addition, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that claim to qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments and transfers or reportable eligibility events, unjust enrichment issues are implicated.

18. *Wireless Telecommunications Carriers (except Satellite)*. Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category.³³ Prior to that time, such firms were within the now-superseded categories of “Paging” and “Cellular and Other Wireless Telecommunications.”³⁴ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.³⁵ For the category of Wireless Telecommunications Carriers (except Satellite), preliminary data for 2007 show that there were 11,927 firms operating that year.³⁶ While the Census Bureau has not released data on the establishments broken down by number of

²⁹ 13 C.F.R. § 121.201, NAICS code 517110.

³⁰ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

³¹ 13 C.F.R. § 121.201, NAICS code 517110.

³² TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

³³ U.S. Census Bureau, 2007 NAICS Definitions, “517210 Wireless Telecommunications Categories (Except Satellite)”; <http://www.census.gov/naics/2007/def/ND517210.HTM#N517210>.

³⁴ U.S. Census Bureau, 2002 NAICS Definitions, “517211 Paging”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>; U.S. Census Bureau, 2002 NAICS Definitions, “517212 Cellular and Other Wireless Telecommunications”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

³⁵ 13 C.F.R. § 121.201, NAICS code 517210 (2007 NAICS). The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

³⁶ U.S. Census Bureau, 2007 Economic Census, Sector 51, EC075111 Information: Industry Series: Preliminary Summary Statistics for the United States: 2007, NAICS code 517210 (issued Oct. 20, 2009); (continued . . .)

employees, we note that the Census Bureau lists total employment for all firms in that sector at 281,262.³⁷ Since all firms with fewer than 1,500 employees are considered small, given the total employment in the sector, we estimate that the vast majority of wireless firms are small.

19. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.³⁸ The SBA has approved these definitions.³⁹ The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, seven bidders won 31 licenses that qualified as very small business entities, and one bidder won one license that qualified as a small business entity.

20. *1670–1675 MHz Services.* This service can be used for fixed and mobile uses, except aeronautical mobile.⁴⁰ An auction for one license in the 1670–1675 MHz band commenced on April 30, 2003 and closed the same day. One license was awarded. The winning bidder was not a small entity.

21. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite).⁴¹ Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.⁴² According to *Trends in Telephone Service* data, 434 carriers reported that they were engaged in wireless telephony.⁴³ Of these, an estimated 222 have 1,500 or fewer employees and 212 have more than 1,500 employees.⁴⁴ Therefore, approximately half of these entities can be considered small.

22. *Broadband Personal Communications Service.* The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous calendar years.⁴⁵ For F-Block licenses, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross

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http://factfinder.census.gov/servlet/IBQTable?-fds_name=EC0700A1&-_clearIBQ=Y&-ds_name=EC075111&-NAICS2007=51721.

³⁷ *Id.*

³⁸ *Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS)*, GN Docket No. 96-228, Report and Order, 12 FCC Rcd 10785, 10879, para. 194 (1997).

³⁹ See Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC (filed Dec. 2, 1998) (*Alvarez Letter 1998*).

⁴⁰ 47 C.F.R. § 2.106; see generally 47 C.F.R. §§ 27.1–27.70.

⁴¹ 13 C.F.R. § 121.201, NAICS code 517210.

⁴² *Id.*

⁴³ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

⁴⁴ *Id.*

⁴⁵ See *Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission’s Cellular/PCS Cross-Ownership Rule*; WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7850–52, paras. 57–60 (1996) (“*PCS Report and Order*”); see also 47 C.F.R. § 24.720(b).

revenues of not more than \$15 million for the preceding three calendar years.⁴⁶ These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.⁴⁷ No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks.⁴⁸ On April 15, 1999, the Commission completed the reauction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22.⁴⁹ Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

23. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status.⁵⁰ Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.⁵¹ On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71.⁵² Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses.⁵³ On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78.⁵⁴ Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.⁵⁵

24. *Specialized Mobile Radio Licenses.* The Commission awards “small entity” bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous calendar years.⁵⁶ The Commission awards “very small entity” bidding credits to firms that had revenues of no more than \$3 million in each of the three previous calendar years.⁵⁷ The SBA has approved these small

⁴⁶ See *PCS Report and Order*, 11 FCC Rcd at 7852, para. 60.

⁴⁷ See *Alvarez Letter 1998*.

⁴⁸ See *Broadband PCS, D, E and F Block Auction Closes*, Public Notice, Doc. No. 89838 (rel. Jan. 14, 1997).

⁴⁹ See *C, D, E, and F Block Broadband PCS Auction Closes*, Public Notice, 14 FCC Rcd 6688 (WTB 1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. *Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees*, WT Docket No. 97-82, Fourth Report and Order, 13 FCC Rcd 15743, 15768, para. 46 (1998).

⁵⁰ See *C and F Block Broadband PCS Auction Closes; Winning Bidders Announced*, Public Notice, 16 FCC Rcd 2339 (2001).

⁵¹ See *Broadband PCS Spectrum Auction Closes; Winning Bidders Announced for Auction No. 58*, Public Notice, 20 FCC Rcd 3703 (2005).

⁵² See *Auction of Broadband PCS Spectrum Licenses Closes; Winning Bidders Announced for Auction No. 71*, Public Notice, 22 FCC Rcd 9247 (2007).

⁵³ *Id.*

⁵⁴ See *Auction of AWS-1 and Broadband PCS Licenses Closes; Winning Bidders Announced for Auction 78*, Public Notice, 23 FCC Rcd 12749 (WTB 2008).

⁵⁵ *Id.*

⁵⁶ 47 C.F.R. § 90.814(b)(1).

⁵⁷ 47 C.F.R. § 90.814(b)(1).

business size standards for the 900 MHz Service.⁵⁸ The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the \$15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band.⁵⁹ A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.⁶⁰

25. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band and qualified as small businesses under the \$15 million size standard.⁶¹ In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded.⁶² Of the 22 winning bidders, 19 claimed small business status and won 129 licenses. Thus, combining all four auctions, 41 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small businesses.

26. In addition, there are numerous incumbent site-by-site SMR licenses and licensees with extended implementation authorizations in the 800 and 900 MHz bands. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. In addition, we do not know how many of these firms have 1,500 or fewer employees, which is the SBA-determined size standard.⁶³ We assume, for purposes of this analysis, that all of the remaining extended implementation authorizations are held by small entities, as defined by the SBA.

27. *Lower 700 MHz Band Licenses.* The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.⁶⁴ The Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.⁶⁵ A “very small business” is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for

⁵⁸ See Letter from Aida Alvarez, Administrator, SBA, to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, FCC (filed Aug. 10, 1999) (*Alvarez Letter 1999*).

⁵⁹ See *Correction to Public Notice DA 96-586 “FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas,”* Public Notice, 18 FCC Rcd 18367 (WTB 1996).

⁶⁰ See *Multi-Radio Service Auction Closes*, Public Notice, 17 FCC Rcd 1446 (WTB 2002).

⁶¹ See *800 MHz Specialized Mobile Radio (SMR) Service General Category (851–854 MHz) and Upper Band (861–865 MHz) Auction Closes; Winning Bidders Announced*, Public Notice, 15 FCC Rcd 17162 (2000).

⁶² See *800 MHz SMR Service Lower 80 Channels Auction Closes; Winning Bidders Announced*, Public Notice, 16 FCC Rcd 1736 (2000).

⁶³ See generally 13 C.F.R. § 121.201, NAICS code 517210.

⁶⁴ See *Reallocation and Service Rules for the 698–746 MHz Spectrum Band (Television Channels 52–59)*, GN Docket No. 01-74, Report and Order, 17 FCC Rcd 1022 (2002) (*Channels 52–59 Report and Order*).

⁶⁵ See *Channels 52–59 Report and Order*, 17 FCC Rcd at 1087–88, para. 172.

the preceding three years.⁶⁶ Additionally, the lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (MSA/RSA) licenses—“entrepreneur”—which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.⁶⁷ The SBA approved these small size standards.⁶⁸ An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.⁶⁹ A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses.⁷⁰ Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.⁷¹ On July 26, 2005, the Commission completed an auction of 5 licenses in the Lower 700 MHz band (Auction No. 60). There were three winning bidders for five licenses. All three winning bidders claimed small business status.

28. In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order*.⁷² An auction of 700 MHz licenses commenced January 24, 2008 and closed on March 18, 2008, which included, 176 Economic Area licenses in the A Block, 734 Cellular Market Area licenses in the B Block, and 176 EA licenses in the E Block.⁷³ Twenty winning bidders, claiming small business status (those with attributable average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years) won 49 licenses. Thirty three winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) won 325 licenses.

29. *Upper 700 MHz Band Licenses*. In the *700 MHz Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz licenses.⁷⁴ On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one

⁶⁶ See *id.*

⁶⁷ See *id.*, 17 FCC Rcd at 1088, para. 173.

⁶⁸ See *Alvarez Letter 1999*.

⁶⁹ See *Lower 700 MHz Band Auction Closes*, Public Notice, 17 FCC Rcd 17272 (WTB 2002).

⁷⁰ See *Lower 700 MHz Band Auction Closes*, Public Notice, 18 FCC Rcd 11873 (WTB 2003).

⁷¹ See *id.*

⁷² *Service Rules for the 698–746, 747–762 and 777–792 MHz Band; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review—Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule*, WT Docket Nos. 07-166, 06-169, 06-150, 03-264, 96-86, PS Docket No. 06-229, CC Docket No. 94-102, Second Report and Order, 22 FCC Rcd 15289, 15359 n. 434 (2007) (*700 MHz Second Report and Order*).

⁷³ See *Auction of 700 MHz Band Licenses Closes*, Public Notice, 23 FCC Rcd 4572 (WTB 2008).

⁷⁴ *700 MHz Second Report and Order*, 22 FCC Rcd 15289.

nationwide license in the D Block.⁷⁵ The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed \$15 million for the preceding three years) and winning five licenses.

30. *700 MHz Guard Band Licensees.* In 2000, in the 700 MHz Guard Band Order, the Commission adopted size standards for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.⁷⁶ A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.⁷⁷ Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.⁷⁸ SBA approval of these definitions is not required.⁷⁹ An auction of 52 Major Economic Area licenses commenced on September 6, 2000, and closed on September 21, 2000.⁸⁰ Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.⁸¹

31. *Air-Ground Radiotelephone Service.* The Commission has previously used the SBA’s small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons.⁸² There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and under that definition, we estimate that almost all of them qualify as small entities under the SBA definition. For purposes of assigning Air-Ground Radiotelephone Service licenses through competitive bidding, the Commission has defined “small business” as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$40 million.⁸³ A “very small business” is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$15 million.⁸⁴ These definitions were approved by the SBA.⁸⁵ In May 2006, the

⁷⁵ See *Auction of 700 MHz Band Licenses Closes*, Public Notice, 23 FCC Rcd 4572 (WTB 2008).

⁷⁶ See *Service Rules for the 746–764 MHz Bands, and Revisions to Part 27 of the Commission’s Rules*, WT Docket No. 99-168, Second Report and Order, 15 FCC Rcd 5299 (2000) (*746–764 MHz Band Second Report and Order*).

⁷⁷ See *746–764 MHz Band Second Report and Order*, 15 FCC Rcd at 5343, para. 108.

⁷⁸ See *id.*

⁷⁹ See *id.* at 5343, para. 108 n.246 (for the 746–764 MHz and 776–794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain SBA approval before adopting small business size standards).

⁸⁰ See *700 MHz Guard Bands Auction Closes: Winning Bidders Announced*, Public Notice, 15 FCC Rcd 18026 (WTB 2000).

⁸¹ See *700 MHz Guard Bands Auction Closes: Winning Bidders Announced*, Public Notice, 16 FCC Rcd 4590 (WTB 2001).

⁸² 13 C.F.R. § 121.201, NAICS codes 517210.

⁸³ *Amendment of Part 22 of the Commission’s Rules to Benefit the Consumers of Air-Ground Telecommunications Services, Biennial Regulatory Review—Amendment of Parts 1, 22, and 90 of the Commission’s Rules, Amendment of Parts 1 and 22 of the Commission’s Rules to Adopt Competitive Bidding Rules for Commercial and General Aviation Air-Ground Radiotelephone Service*, WT Docket Nos. 03-103, 05-42, Order on Reconsideration and Report and Order, 20 FCC Rcd 19663, paras. 28–42 (2005).

⁸⁴ *Id.*

Commission completed an auction of nationwide commercial Air-Ground Radiotelephone Service licenses in the 800 MHz band (Auction No. 65). On June 2, 2006, the auction closed with two winning bidders winning two Air-Ground Radiotelephone Services licenses. Neither of the winning bidders claimed small business status.

32. *AWS Services (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3)).* For the AWS-1 bands,⁸⁶ the Commission has defined a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. For AWS-2 and AWS-3, although we do not know for certain which entities are likely to apply for these frequencies, we note that the AWS-1 bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS-2 or AWS-3 bands but proposes to treat both AWS-2 and AWS-3 similarly to broadband PCS service and AWS-1 service due to the comparable capital requirements and other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.⁸⁷

33. *3650–3700 MHz band.* In March 2005, the Commission released a *Report and Order and Memorandum Opinion and Order* that provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (*i.e.*, 3650–3700 MHz). As of September 2009, more than 1,080 licenses have been granted and more than 4,870 sites have been registered. The Commission has not developed a definition of small entities applicable to 3650–3700 MHz band nationwide, non-exclusive licensees. However, we estimate that the majority of these licensees are Internet Access Service Providers (ISPs) and that most of those licensees are small businesses.

34. *Fixed Microwave Services.* Microwave services include common carrier,⁸⁸ private-operational fixed,⁸⁹ and broadcast auxiliary radio services.⁹⁰ They also include the Local Multipoint Distribution Service (LMDS),⁹¹ the Digital Electronic Message Service (DEMS),⁹² and the 24 GHz

(Continued from previous page)

⁸⁵ See Letter from Hector V. Barreto, Administrator, SBA, to Gary D. Michaels, Deputy Chief, Auctions and Spectrum Access Division, Wireless Telecommunications Bureau, FCC (filed Sept. 19, 2005).

⁸⁶ The service is defined in section 90.1301 *et seq.* of the Commission’s Rules, 47 C.F.R. § 90.1301 *et seq.*

⁸⁷ See *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Report and Order, 18 FCC Rcd 25162, App. B (2003), modified by *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Order on Reconsideration, 20 FCC Rcd 14058, App. C (2005); *Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands*; *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket Nos. 04-356, 02-353, Notice of Proposed Rulemaking, 19 FCC Rcd 19263, App. B (2005); *Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band*, WT Docket No. 07-195, Notice of Proposed Rulemaking, 22 FCC Rcd 17035, App. (2007).

⁸⁸ See 47 C.F.R. Part 101, Subparts C and I.

⁸⁹ See 47 C.F.R. Part 101, Subparts C and H.

⁹⁰ Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission’s Rules. See 47 C.F.R. Part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

⁹¹ See 47 C.F.R. Part 101, Subpart L.

⁹² See 47 C.F.R. Part 101, Subpart G.

Service,⁹³ where licensees can choose between common carrier and non-common carrier status.⁹⁴ At present, there are approximately 36,708 common carrier fixed licensees and 59,291 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. There are approximately 135 LMDS licensees, three DEMS licensees, and three 24 GHz licensees. The Commission has not yet defined a small business with respect to microwave services. For purposes of the IRFA, we will use the SBA's definition applicable to Wireless Telecommunications Carriers (except satellite)—*i.e.*, an entity with no more than 1,500 persons.⁹⁵ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.⁹⁶ For the category of Wireless Telecommunications Carriers (except Satellite), preliminary data for 2007 show that there were 11,927 firms operating that year.⁹⁷ While the Census Bureau has not released data on the establishments broken down by number of employees, we note that the Census Bureau lists total employment for all firms in that sector at 281,262.⁹⁸ Since all firms with fewer than 1,500 employees are considered small, given the total employment in the sector, we estimate that the vast majority of firms using microwave services are small. We note that the number of firms does not necessarily track the number of licensees. We estimate that virtually all of the Fixed Microwave licensees (excluding broadcast auxiliary licensees) would qualify as small entities under the SBA definition.

35. *Broadband Radio Service and Educational Broadband Service.* Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and “wireless cable,” transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).⁹⁹ In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three calendar years.¹⁰⁰ The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.¹⁰¹

⁹³ *See id.*

⁹⁴ *See* 47 C.F.R. §§ 101.533, 101.1017.

⁹⁵ 13 C.F.R. § 121.201, NAICS code 517210.

⁹⁶ 13 C.F.R. § 121.201, NAICS code 517210 (2007 NAICS). The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

⁹⁷ U.S. Census Bureau, 2007 Economic Census, Sector 51, EC075111 Information: Industry Series: Preliminary Summary Statistics for the United States: 2007, NAICS code 517210 (rel. Oct. 20, 2009), http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-clearIBQ=Y&-ds_name=EC075111&-NAICS2007=51721&-_lang=en.

⁹⁸ *Id.*

⁹⁹ *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act—Competitive Bidding*, MM Docket No. 94-131, PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995).

¹⁰⁰ 47 C.F.R. § 21.961(b)(1).

¹⁰¹ 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard of 1500 or fewer employees.

After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules.

36. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,436 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.¹⁰² Thus, we estimate that at least 2,336 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies."¹⁰³ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use the most current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: all such firms having \$13.5 million or less in annual receipts.¹⁰⁴ According to Census Bureau data for 2002, there were a total of 1,191 firms in this previous category that operated for the entire year.¹⁰⁵ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.¹⁰⁶ Thus, the majority of these firms can be considered small.

5. Satellite Service Providers

37. *Satellite Telecommunications Providers.* Two economic census categories address the satellite industry. The first category has a small business size standard of \$15 million or less in average annual receipts, under SBA rules.¹⁰⁷ The second has a size standard of \$25 million or less in annual receipts.¹⁰⁸ The most current Census Bureau data in this context, however, are from the (last) economic census of 2002, and we will use those figures to gauge the prevalence of small businesses in these categories.¹⁰⁹

38. The category of Satellite Telecommunications "comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or

¹⁰² The term "small entity" within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on EBS licensees.

¹⁰³ U.S. Census Bureau, 2007 NAICS Definitions, "517110 Wired Telecommunications Carriers," (partial definition), <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110> (last visited Oct. 21, 2009).

¹⁰⁴ 13 C.F.R. § 121.201, NAICS code 517110.

¹⁰⁵ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, tbl. 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (rel. November 2005).

¹⁰⁶ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

¹⁰⁷ 13 C.F.R. § 121.201, NAICS code 517410.

¹⁰⁸ 13 C.F.R. § 121.201, NAICS code 517919.

¹⁰⁹ 13 C.F.R. § 121.201, NAICS codes 517410 and 517910 (2002).

reselling satellite telecommunications.”¹¹⁰ For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.¹¹¹ Of this total, 307 firms had annual receipts of under \$10 million, and 26 firms had receipts of \$10 million to \$24,999,999.¹¹² Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

39. The second category of All Other Telecommunications comprises, *inter alia*, “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.”¹¹³ For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.¹¹⁴ Of this total, 303 firms had annual receipts of under \$10 million and 15 firms had annual receipts of \$10 million to \$24,999,999.¹¹⁵ Consequently, we estimate that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

6. Cable Service Providers

40. Because section 706 requires us to monitor the deployment of broadband regardless of technology or transmission media employed, we anticipate that some broadband service providers may not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

41. *Cable and Other Program Distributors.* Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.”¹¹⁶ The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: all such firms having \$13.5 million or less in annual receipts.¹¹⁷ According to Census Bureau data for 2002, there were a total of 1,191 firms in this previous

¹¹⁰ U.S. Census Bureau, 2007 NAICS Definitions, “517410 Satellite Telecommunications,” <http://www.census.gov/naics/2007/def/ND517410.HTM> (last visited Oct. 21, 2009).

¹¹¹ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” tbl. 4, NAICS code 517410 (rel. Nov. 2005).

¹¹² *Id.* An additional 38 firms had annual receipts of \$25 million or more.

¹¹³ U.S. Census Bureau, 2007 NAICS Definitions, “517919 All Other Telecommunications,” <http://www.census.gov/naics/2007/def/ND517919.HTM#N517919> (last visited Oct. 21, 2009).

¹¹⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” tbl. 4, NAICS code 517910 (issued Nov. 2005).

¹¹⁵ *Id.* An additional 14 firms had annual receipts of \$25 million or more.

¹¹⁶ U.S. Census Bureau, 2007 NAICS Definitions, “517110 Wired Telecommunications Carriers,” (partial definition), <http://www.census.gov/naics/2007/def/ND517110.HTM#N517110> (last visited Oct. 21, 2009).

¹¹⁷ 13 C.F.R. § 121.201, NAICS code 517110.

category that operated for the entire year.¹¹⁸ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.¹¹⁹ Thus, the majority of these firms can be considered small.

42. *Cable Companies and Systems.* The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers, nationwide.¹²⁰ Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.¹²¹ In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.¹²² Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000–19,999 subscribers.¹²³ Thus, under this second size standard, most cable systems are small.

43. *Cable System Operators.* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."¹²⁴ The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.¹²⁵ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.¹²⁶ We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,¹²⁷ and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

¹¹⁸ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, tbl. 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (rel. Nov. 2005).

¹¹⁹ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

¹²⁰ 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

¹²¹ See BROADCASTING & CABLE YEARBOOK 2006, at A-8, C-2 (Harry A. Jessell ed., 2005) (data current as of June 30, 2005); TELEVISION & CABLE FACTBOOK 2006, at D-805 to D-1857 (Albert Warren ed., 2005).

¹²² 47 C.F.R. § 76.901(c).

¹²³ TELEVISION & CABLE FACTBOOK 2006, at F-2 (Albert Warren ed., 2005) (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

¹²⁴ 47 U.S.C. § 543(m)(2); see 47 C.F.R. § 76.901(f) & nn. 1–3.

¹²⁵ 47 C.F.R. § 76.901(f); see Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, 16 FCC Rcd 2225 (Cable Services Bureau 2001).

¹²⁶ See BROADCASTING & CABLE YEARBOOK 2006, at A-8, C-2 (Harry A. Jessell ed., 2005) (data current as of June 30, 2005); TELEVISION & CABLE FACTBOOK 2006, at D-805 to D-1857 (Albert Warren ed., 2005).

¹²⁷ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. See 47 C.F.R. § 76.909(b).

7. Electric Power Generators, Transmitters, and Distributors

44. *Electric Power Generators, Transmitters, and Distributors.* The Census Bureau defines an industry group comprised of “establishments, primarily engaged in generating, transmitting, and/or distributing electric power. Establishments in this industry group may perform one or more of the following activities: (1) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or the transmission system to the final consumer.”¹²⁸ The SBA has developed a small business size standard for firms in this category: “A firm is small if, including its affiliates, it is primarily engaged in the generation, transmission, and/or distribution of electric energy for sale and its total electric output for the preceding fiscal year did not exceed 4 million megawatt hours.”¹²⁹ According to Census Bureau data for 2002, there were 1,644 firms in this category that operated for the entire year.¹³⁰ Census data do not track electric output and we have not determined how many of these firms fit the SBA size standard for small, with no more than 4 million megawatt hours of electric output. Consequently, we estimate that 1,644 or fewer firms may be considered small under the SBA small business size standard.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

45. As indicated above,¹³¹ the Internet’s legacy of openness and transparency has been critical to its success as an engine for creativity, innovation, and economic development. To help preserve this fundamental character of the Internet, the Notice proposes a transparency principle that may impose a reporting, recordkeeping, or other compliance burden on some small entities.¹³² We do not attempt here to provide an estimate in terms of potential burden hours. Rather, we anticipate that commenters will provide the Commission with reliable information on any costs and burdens on small entities.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

46. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small

¹²⁸ U.S. Census Bureau, 2002 NAICS Definitions, “2211 Electric Power Generation, Transmission and Distribution,” <http://www.census.gov/epcd/naics02/def/NDEF221.HTM> (last visited Oct. 21, 2009).

¹²⁹ 13 C.F.R. § 121.201, NAICS codes 221111, 221112, 221113, 221119, 221121, 221122, n. 1.

¹³⁰ U.S. Census Bureau, 2002 Economic Census, Subject Series: Utilities, “Establishment and Firm Size (Including Legal Form of Organization),” tbl. 4, NAICS codes 221111, 221112, 221113, 221119, 221121, 221122 (rel. Nov. 2005).

¹³¹ See Notice, part I.

¹³² See Notice, section IV.E. Specifically, we propose that broadband Internet access service providers should be required to disclose information to users concerning network management and other practices and potentially provide their network management practices in reports to the government.

entities.¹³³ While we have yet to describe any significant alternatives, we expect to consider all of these factors when we have received substantive comment from the public and potentially affected entities.

47. The open and transparent Internet has been a launching pad for innumerable creative and entrepreneurial ventures and enabled businesses small and large, wherever located, to reach customers around the globe. As discussed above,¹³⁴ the Notice seeks comment on a variety of issues relating to preserving this openness and transparency, including the codification of the four existing Internet principles, the codification of additional nondiscrimination and transparency principles, and how, to what extent, and when the principles should apply to wireless Internet access service providers. In issuing this Notice, the Commission is attempting to preserve the historically open architecture that has enabled the Internet to become a platform for commerce and innovation that is equally accessible to the new entrant and the more established enterprise, without imposing unnecessary burdens on ISPs, including those that are small entities. We anticipate that the record will suggest alternative ways in which the Commission could increase the overall benefits for, and lessen the overall burdens on, small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

48. None.

¹³³ 5 U.S.C. § 603(c).

¹³⁴ See *supra* paras. 2–5.

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52

I'd like to begin by thanking my colleagues on the Commission. We are still getting to know each other. Some might have expected that the issue we consider today—with its long and fraught history—might have driven us apart. That has not happened. We've had healthy and productive collaboration. And while there are some areas of unsurprising disagreement, the more significant fact is that there are substantial areas of agreement that are growing by the day.

Today's Notice focuses on the Internet, the most significant technological breakthrough of our time. What started as an arcane lab experiment has developed into an unparalleled platform for innovation and investment, an engine for job creation and economic growth, and a vibrant forum for civic engagement. This development is due in large part to a single element of the Internet's design: Its openness. The Internet is and has been an open platform and it is that openness—and the extraordinary benefits it has brought for our country—that we seek to preserve through the proceeding we launch today.

The Internet's openness has allowed entrepreneurs and innovators, small and large, to create countless applications and services without having to seek permission from anyone. As a result, Internet pioneers with little more than a good idea and a no-frills Internet connection have built hundreds of thousands of small businesses as well as web giants. More and more Americans depend on the Internet every day—at home, at work, in school—at our desks, and on the move. The Internet connects us to our family and friends, to the universe of knowledge, and to the working of our nation's democracy.

The Internet has provided enormous benefits to consumers in the form of new and previously unimaginable services, competition, and choice. We wouldn't have these services without a strong network infrastructure and the billions of dollars of private capital invested to build it. And ever-growing consumer demand is driving billions of dollars of additional investment to increase broadband capacity and improve the intelligence of networks.

And so we have a virtuous cycle of investment, innovation, jobs, and consumer benefits. According to one study, the Internet supports more than three million American jobs. A core goal of the FCC's efforts is to preserve and promote this virtuous cycle driven by a free and open Internet. That's how we'll ensure that the Internet becomes an *enduring* engine for opportunity and prosperity for all Americans.

Given the importance of the Internet, it should come as no surprise that over the past years, the Commission has considered the question of how to safeguard the free and open Internet in more than 10 different proceedings, building a record of over 100,000 pages of comments, submitted by approximately 40,000 companies, organizations, and members of the public. In 2005, a unanimous Commission issued the *Internet Policy Statement*, affirming the agency's "duty to preserve and promote the vibrant and open character of the Internet." In the intervening years, the Commission has enforced these principles, adopted openness conditions in a number of significant mergers, and placed openness requirements on certain spectrum licenses. Two years ago, the Commission issued a broad-ranging *Notice of Inquiry* that sought comment on many of the issues addressed in today's Notice, including the topics of nondiscrimination and transparency.

Now it's time to take the next step growing out of the record and the Commission's experience—launching a process to craft reasonable and enforceable rules of the road to preserve a free and open

internet. Because, let's be honest, the Commission's actions, laudable in so many respects, have left the protection of the free and open Internet unnecessarily vulnerable and uncertain.

The problem is not merely that we've seen some significant situations where broadband providers have degraded the data streams of popular lawful services and blocked consumer access to lawful applications, even after the Commission adopted its openness principles.

Nor is the problem merely that, when the policies summarized in the *Internet Policy Statement* and its initial four principles have been enforced by the Commission, they have been attacked, including in pending litigation, precisely because they are not rules developed through the kind of notice-and-public-comment process that we should commence today.

Nor is the problem merely that the initial four principles failed to address explicitly some important concepts, such as the need for transparency when it comes to network management practices.

Nor is the problem merely that broadband providers have understandable economic incentives to favor their own content, applications, or services or to otherwise disfavor competition in ways that may not be entirely consistent with our long-term national interest in promoting consumer choice and preserving a free and open Internet for everyone.

The heart of the problem is that, taken together, we face the dangerous combination of an uncertain legal framework with ongoing as well as emerging challenges to a free and open Internet. Given the potentially huge consequences of having the open Internet diminished through inaction, the time is now to move forward with consideration of fair and reasonable rules of the road, rules that would be enforceable and implemented on a case-by-case basis. Indeed, it would be a serious failure of responsibility not to consider such rules, for that would be gambling with the most important technological innovation of our time.

An open Internet deserves an open process. Accordingly, I fully support this Notice, which will launch a fact-based, transparent, and participatory process to develop rules to preserve an open Internet. The Notice seeks to identify the hard questions the Commission must address as part of this rulemaking, and that the Commission must ultimately address based on the facts and the record before it. And the Notice contains draft rules so that all interested parties and the public can have something specific to comment upon. This is a procedural reform that has been called for by legislators and my fellow Commissioners on a bipartisan basis.

Now in the run-up to today's meeting, there has been a deluge of rumors, and no shortage of myths and half-truths. There have also been some reasonable concerns about what the draft rules might look like. My goal has been for us to listen, to pull out and address the fair points and good ideas, regardless of source. And our staff has worked hard to do so.

That said, do any of us think that the draft rules proposed today perfect? Are they set in stone? No—we are at the beginning of a rulemaking process, with draft rules offered in the context of a Notice that seeks to spot the issues, ask the hard questions, and seek broad public input. We're addressing a topic of great importance, where parties have strong views based on differing perspectives and experiences, and where the choice of a single word can lead to vigorous, complex, and highly technical debates. I come to this issue with a keen recognition that we do not yet have all the answers, and that we have a lot of hard work to do. But again, that is precisely the reason to begin this chapter of the process in a way that sets the table for an informed, fruitful discussion about issues of real importance to the future of the Internet and our country.

In that spirit, we are announcing today that we will be developing a Technical Advisory Process, so that the difficult engineering questions we face are fully informed by a broad range of engineers based on sound engineering principles and not on politics. I have asked Julie Knapp, Chief of our Office of Engineering and Technology, to launch this effort, working with Sharon Gillett, Ruth Milkman, and other key senior staff leading in this process.

This will be just one part of what will be a fully participatory effort. OpenInternet.gov is open for business. We will have public workshops modeled on the success of our Broadband team's efforts. I will continue to push our staff to develop and experiment with new participatory mechanisms for a 21st century Commission, looking for the best ways to build a fact-based process for record-building and decision-making.

While today's proposal recognizes that there are still open questions and hard work to be done, the Notice and draft rules also reflect a set of conceptual commitments that I fully endorse.

First, the goal is and must remain without compromise preserving a free and open internet. Any rules we adopt must preserve our freedom to connect, to communicate, and to create that is the wonder of the open Internet. Each and every user of the Internet must have access to an unlimited online universe of ideas and commerce. Internet users should always have the final say about their online experience, whether it's the software, applications or services they choose, or the networks and hardware they use to connect to the Internet.

Many people have fought long and hard for this concept of a free and open Internet, inside and outside the Commission, making sure that we keep our eye on this powerful aspiration for our country and the world. They deserve our gratitude, and today's action owes very much to their efforts.

Second, we must promote investment and innovation broadly. The idea that we must choose between innovation and investment on the "edge" of the network, where content and applications are developed, or innovation and investment in the "core" of the network, where broadband providers operate, is a false choice. Our rules can and must promote investment and innovation throughout the Internet ecosystem. I know from my own experience, and we all recognize what our Broadband team reported to the Commission at our last meeting: that very substantial investment is required for network providers to build out broadband networks for the entire country, and increase the capacity of those networks. The full potential of the Internet cannot be unleashed without robust and healthy broadband networks, and broadband providers need room to experiment with new technologies and business models in order to earn a return on their investment and deploy high-speed broadband to all Americans.

At the same time, the view that 'anything goes' is not a serious argument. And I reject the notion that we must choose between open Internet rules and investment by service providers in their networks. This argument is somewhat routinely made when the FCC considers rules on any variety of topics. History tells us that this, too, is a false choice. FCC rules over the years have been a powerful spur to investment and innovation—especially when the agency focuses on promoting competition and choice. And in the context of net neutrality, notwithstanding the issuance in 2005 and enforcement in 2008 of the Commission's openness principles, as well as the adoption of openness conditions in important mergers during that period, Internet service providers have continued to invest heavily in their networks. As an increasing numbers of stakeholders agree, investment in advanced *and* open networks is essential to our broadband future.

Third, there must be flexibility. Broadband providers must be allowed meaningful latitude to solve the difficult challenges of managing their networks and providing their customers with a high-quality Internet experience. We recognize that there are real congestion and other network-management

issues, especially with respect to wireless broadband. We also recognize of course that Internet technology is developing rapidly. We understand the risk of unintended consequences. Openness rules should be sufficiently general and flexible enough to account for, and invite, technological change and progress.

Fourth, the government's role in preserving openness is important but also modest. It should be no greater than necessary to achieve the core goal of preserving a free and open Internet. Open Internet rules should be high-level, not heavy handed. And in fact, the draft rules in the Notice are less than two pages long. The goal is to provide a fair framework in which all participants in the Internet ecosystem can operate, ultimately minimizing the need for government involvement. That is why I have emphasized the new Sixth Principle—the idea that broadband providers must be transparent about their network management practices, which should foster private resolution of disputes and reduce the need for government enforcement. That, in fact, is the overall goal of an open Internet framework.

That is also why I have been clear that government should not be in the business of running or regulating the Internet. Government should promote competition. It should protect consumers' right to access the lawful content, applications, and services of their choosing. It should ensure that there is no central authority preventing people or businesses from communicating over the Internet. It should certainly not be that central authority. As others have said: "The minute that anyone, whether from government or the private sector, starts to control how people use the Internet, it is the beginning of the end of the Net as we know it." There should be no confusion on this point, at home or abroad. This Commission fully agrees that government must not restrict the free flow of information over the Internet.

Fifth, the Internet must be safe and secure as well as open. Open Internet rules should apply to *lawful* content, applications, and services. They are not a shield for copyright infringement, spam, or other violations of the law. They must honor the protection of users' privacy. And they must be consistent with public safety as well as homeland and national security.

Sixth, openness is essential for the Internet however it's accessed. It doesn't make sense to have one Internet when your laptop is plugged into a wall and another when accessing the Internet through a wireless modem. At the same time, wireless networks are different from wired networks. Given fundamental differences in technology, how, when and to what extent open Internet rules should apply to different access platforms, particularly mobile broadband, will undoubtedly vary. This is an important issue on which the Notice seeks to develop a full and informed record.

Let me close by emphasizing what I think all of us here on the dais believe. That the Internet's openness is a precious thing and that it must be preserved and promoted. That the Commission does its job best when it has input from all stakeholders and asks hard questions that provoke vigorous debate. And that we have great faith in the strong staff of the FCC, working with the broadest possible range of outside participants, to navigate through these complex waters.

I am pleased that there is broad agreement inside the Commission that we should move forward with a healthy and transparent process on an open Internet. I am pleased to see leaders outside the Commission working to find common ground on enforceable rules. Given the importance of an open Internet to prosperity and opportunity for all Americans, our country deserves no less.

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS**

Re: *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52

This is an historic day at the FCC. It is historic because the Commission takes a long stride—perhaps its longest ever—toward ensuring a free, open and dynamic Internet. While in one sense today’s *Notice of Proposed Rulemaking* marks a natural progression from our adoption of the *Internet Policy Statement* in 2005, in reality it is the clearest statement yet that we will ensure that the genius of the Internet is not subverted as it leaves its infancy and begins to come of age. We must start from the premise that we are dealing with something very precious here—a technology leap as great as the printing press that was invented 570 years ago. This is perhaps the greatest small “d” democratic platform ever devised. In its capacity to facilitate communications—indeed, to manage almost the totality of the communications that take place among us—the potential power of this technology is awesome. It can do so much good. Misused, it can fail itself and fail us all. So I start from the premise that we as regulators, we as businesses, we as users—all of us—have an historic obligation to maintain the freedom of the Net.

I have advocated long and hard for the Commission to establish a mechanism to ensure that consumers have continued access to a vibrant, open Internet—an Internet that was born on openness, thrived on openness, and depends on openness to realize its going-forward potential. This Commission will act, I predict, to maintain that openness.

We need rules-of-the-road to make that happen. We need expert judgment to evaluate any and all allegations that the freedom of the Internet is being compromised. And we need a venue with authority to redress such wrongs if, indeed, such wrongs are found. I stated my preference for clear-cut rules, including a fifth principle of non-discrimination, at the time we adopted the Four Principles of the *Internet Policy Statement*. Now, four years later—having gained a lot more knowledge and some practical experience in applying the principles of Internet openness—we finally step up to the critical challenge of developing meaningful, predictable, transparent and clearly enforceable rules of the road. And we propose a sixth rule of transparency. Users have a right to know how the network is being managed and what practices providers are employing. This sixth rule of transparency is not just good policy—it is essential policy.

The Notice we adopt today is not only a clarion call for Internet freedom. It is also a reasoned and rational way to get there—a data-driven, on-the-record examination of how to safeguard the benefits of the Internet for American consumers from potential gatekeeper control. The Internet must never be about powerful gatekeepers and walled gardens. It must always be about the smoothest possible flow of communications among people. As consumers increasingly access the Internet via different technology platforms, we seek to develop rules to preserve Internet openness, regardless of how consumers choose to access it. History tells us we have to do this. History tells us that when technological capability to exercise control combines with a financial incentive to do so, some will try to turn this power and opportunity to their own advantage. That doesn’t mean I expect this to become normal business practice, but even if it’s only a few who try, the risk to our interconnected and interdependent Internet is too great to take. I’m not into riverboat gambles that everything will be fine if we just look the other way.

We recognized in the Four Principles—as well as in the draft rules we propose today—that a well-considered approach to an open Internet should take into account reasonable network management. Evolutionary and revolutionary changes can alter the landscape and even change the parameters of what is or is not reasonable at a particular time. What is reasonable today may be unreasonable tomorrow—and *vice versa*. What constitutes reasonable network management in a 768 Kbps world will likely be

different from reasonable network management in a 50 or 100 Mbps world. And what constitutes reasonable network management in a wireless world will differ from reasonable network management in a wireline world. The proposed rules recognize this reality. And they provide the expert venue—the FCC—where consumers can come if they have concerns or complaints to make. It’s about as commonsensical a way to ensure an open and dynamic Internet as I can imagine.

The principles I pushed for in the *Internet Policy Statement* four years ago focused on consumer rights. This is, after all, a consumer protection agency. While just about everybody gains from the availability of an open Internet, no one gains so much as consumers. As we move forward with draft rules, the legal language in the Notice shifts from the rights of consumers to the obligations of providers. But let’s be clear that the consumer focus has shifted not a whit. While some may prefer the broad language of the original principles, it is important to be clear as to whom the obligations apply. That said, I am pleased that we seek comment on the pros and cons of applying these rules to entities other than broadband Internet access service providers. In particular, we need to recognize that the gatekeepers of today may not be the gatekeepers of tomorrow. Our job is not so much to mediate among giants as it is to protect consumers.

Though we may differ in some respects on the substance of today’s proceeding, I want to commend the spirit of collegiality and compromise that my colleagues have shown in shaping the Notice we adopt today. I know we often say this at these agenda meetings, but—wow!—it was really true here—like I’ve seldom seen before. Chairman Genachowski has set a new tone of openness. He has consulted with the experts, studied the record, met with stakeholders large and small, walked the halls of the Eighth Floor to understand the concerns of his colleagues and to search for the resolution of differences. The Notice is much the better for it. You will see in this Notice of Proposed Rulemaking something we haven’t often seen in other NPRMs in recent years—the *actual language* of the proposed rules! How’s that for a change? And how better to stimulate discussion and build a meaningful record than giving the public something specific to react to? Moreover, to ensure a thoughtful, well-considered and participatory result—one that’s based on the best possible record—we ask many questions and refrain from tentative conclusions. Also, we seek to fully develop the record by providing an extensive period for public comment. So, Mr. Chairman, I salute you for not just the substance of what we will shortly vote on, but on the process that brings this item to us and that will continue to move us forward.

Now the ball is in the public arena. The Notice earnestly solicits stakeholder input—indeed, the proceeding will rise or fall on the quality of such input. Final action *will* be forthcoming in this proceeding. This Commission *will act*, and it will act on the record it amasses. What will help us most is not flocks of Chicken Littles running around proclaiming “the sky is falling,” but rather facts, data and the real world experiences of innovators, entrepreneurs, industries small and large, consumers, and anyone interested enough to give us the benefit of their thoughts, experiences and recommendations. So, operating on the old adage that decisions without you can sometimes be decisions against you, I urge every individual and every group with an interest to bring us the best and brightest thinking of which they are capable.

In addition to thanking the Chairman, I want to commend my three other colleagues. If their engagement on this item is any indication—and I think it is—of how this new Commission will conduct its deliberations, I am very optimistic about what we can accomplish. I appreciate the input we have already received from a wide gamut of stakeholders and can report that this did indeed make a difference. Finally, I am enormously grateful to my hard-working staff, and the Chairman’s, and my colleagues’ and to the Bureaus who all worked very long, very hard and very successfully to bring us this far. Thanks for a job well done.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL
CONCURRING IN PART, DISSENTING IN PART**

RE: *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52

At the outset, I would like to thank the Chairman for his graciousness and good faith as well as for the energetic spirit of cooperation he has maintained throughout his brief tenure, and especially in the past three weeks as we have examined this Notice of Proposed Rulemaking. Although we may sometimes disagree on substance, I commend him on his persistent eagerness to maintain an open and constructive dialogue with his fellow commissioners in an effort to promote a healthy process for this agency. And today we do disagree on substance. I do not share the majority's view that the Internet is showing breaks and cracks, nor do I believe that the government is the best tool to fix it. I also disagree with the premise that the Commission has the legal authority to regulate Internet network management as proposed.

Nonetheless, it is important for everyone to remember that today the Commission is *starting* a process, not ending one. The window of opportunity for dialogue is just beginning to open. Furthermore, today's action provides ample opportunity for the public to comment on a wide universe of issues. In that vein, I thank the Chairman for including in today's Notice of Proposed Rulemaking the text of proposed rules for public comment. For too long the Commission has fallen into the habit of obscuring from public view the text of proposed rules. I am delighted that the Chairman has taken this step toward better transparency. The Chairman should also be complimented on providing a long and thorough comment period during which I hope a deep and substantial record based on the facts, the law and the public interest will emerge to illuminate a path to a sensible resolution of these important issues.

All of us can agree that the Internet is a tool that should maximize freedom. Consumers should be able to enjoy the fruits of Internet freedom, and the Internet itself should operate under freedom. America's policies, and the policies of all governments, should seek to strengthen such freedoms. We all agree that an open Internet should be preserved. Accordingly, in today's spirit of collegiality, those who disagree with the substance of today's Notice, which carries with it the caption "Preserving the Open Internet," should not be presumed opposed to an open Internet.

With freedom in mind, the Internet is perhaps the greatest deregulatory success story of all time. It became successful not by government fiat, but by all interested parties working together toward a common goal. By definition, the Internet, a global network of networks, is a "Wiki" environment which we all pay for, share and shape. Since it was opened up for public use, as a free society we have worked hard to ensure that the Internet remains robust, safe and open. Also, since its inception, uncounted dedicated souls have worked to ensure that the Internet works, period. Since the early days of the state-run ARPANET, network management and Internet governance initiatives have migrated further away from government regulation, not closer to it. This evolution away from government intervention has been the most important ingredient in the Internet's success.

Early efforts to keep the Internet open and free sparked the creation of non-state-controlled Internet governance entities staffed by volunteer engineers, academics and software developers. These groups have remained largely self-governed, self-funded and nonprofit, with volunteers acting on their own and not on behalf of their employers. No government owns or regulates them.

For example, the Internet Society (ISOC), an umbrella organization founded in 1992, is home to the Internet Engineering Task Force (IETF) that develops technical standards for the Internet. It is a non-

profit corporation with a board of trustees consisting of, and funded by, individuals and organizations in the Internet community virtually free from government influence. Several other organizations work with ISOC on a variety of Internet governance issues. Among them are: the Internet Engineering Steering Group (IESG), the Internet Research Task Force (IRTF), the Internet Research Steering Group (IRSG), and the Internet Architecture Board (IAB), among others.¹ The P4P Working Group, which works on peer-to-peer congestion issues, is essentially no different.

Similarly, the Internet Corporation for Assigned Names and Numbers (ICANN) is a private non-profit entity that works to coordinate the Internet's domain name system. Until last month, ICANN managed the domain name system through a joint project agreement (JPA) with the Department of Commerce. On September 30, the Department of Commerce and ICANN announced the expiration of the JPA, yet another step away from government involvement. In place of the JPA, ICANN and the Department of Commerce have forged a new agreement that reaffirms the private sector-led model for coordination of the domain name system.

By creating flat Internet governance mechanisms that collaboratively work from the "bottom-up," rather than relying on a government-mandated "top-down" model, the Internet is better able to flourish as an entity that promotes freedom at all levels. By way of illustration, some argue that nations whose governments regulate the Internet less live under more freedom, while societies that regulate it more live under less freedom. Or, as Thomas Jefferson observed more than two centuries ago, "The course of history shows that as the government grows, liberty decreases."

As I participated in the International Telecommunications Union's conference in Geneva two weeks ago, I was reminded how closely the international community watches the FCC's movements. After I spoke with regulators from other nations, it became obvious to me that some countries are waiting for the U.S. to assert more government authority over the Internet to help justify an increased state role over Internet management internationally. It is not an exaggeration to say the world is watching what we do. Although we are proceeding with the best of intentions, as we examine the important issues raised in today's Notice, we should keep in mind that our final actions inadvertently could be setting a precedent for some foreign governments with less pure motives to use in justifying stricter Internet regulation. That would be a mistake. Freedom is best served if we promote abundance, collaboration and competition over regulation and rationing. No government has ever succeeded in mandating innovation and investment.

We are here today, in part, because we have seen a deepening division between some network operators and some in the application industry. Some in the applications industry are calling for government regulation of network engineering problems that historically have been resolved through many of the collaborative bodies I've just mentioned. Such collaborative bodies have never failed to resolve major network management challenges. That is a track record the government simply cannot match. One of my concerns regarding today's Notice is that its premise looks at innovation in a way that could actually deepen the division between applications and networks precisely at a time when the market is sparking unprecedented *convergence* between the two.

For instance, many proponents of network management regulation speak of unfettered innovation at the "edge" of networks – such as on consumers' personal computers and wireless devices – while the freedom to innovate "in the middle" of networks should be more limited due to concerns regarding

¹ Association for Computing Machinery, *A Concise Guide to the Major Internet Bodies*, http://www.acm.org/ubiquity/views/v6i5_simoneli.html.

potential anticompetitive conduct by network operators. Today's Notice and its proposed rules could be viewed as operating from a similar premise, however, which could produce counterproductive results. Constructive public policy should subscribe to the philosophy that unfettered innovation should be encouraged equally at *all* points of the network – at the edge and in the core.

As a practical matter, it is fast becoming impossible to separate the two. Consumers are telling the marketplace that they don't want networks that operate merely as "dumb pipes." Sometimes they want the added value and efficiency that comes from intelligence inside networks as well. Those who oversimplify this issue as a zero sum scenario between a dumb pipe and smart edge versus a smart pipe and dumb edge offer only a false choice that does not reflect the realities of today's market. I hope that yesterday's joint blog post between Google and Verizon Wireless on the importance of the consumer Internet experience is the start of continued collaboration and dialogue between these two communities.

Some questions that I hope get addressed in the record are: Is the Commission suggesting today that the government draw a bright line of distinction between networks and applications in an effort to justify regulation in this space? If so, should not the Commission refine its view because networks and applications are converging faster than regulators can measure? Otherwise, would the Commission not be favoring one market player over another absent evidence of an abuse of market power?

For example, Cisco builds Internet routers that contain over 28.1 million lines of code. How are we to ascertain whether each line of code offers a pure operating system function or some other application that adds value? Should that be the Commission's role? Can we make such determinations efficiently? Do we even have the statutory authority to do any of this?² These thorny questions abound,

² My view is that regulation of network management is simply not reasonably ancillary to responsibilities set forth under other sections of the Act. See *United States v. Southwestern Cable Co.*, 392 U.S. 157 (1968), see also *FCC v. Midwest Video Corporation*, 440 U.S. 689 (1979) (*Midwest Video II*).

The majority uses Section 201(b) as part of its basis for jurisdiction contending that it gives the Commission specific authority "to prescribe such rules and regulations as may be necessary in the public interest to carry out the provision of th[e] Act." But all of the language preceding that clause in Section 201 refers to obligations imposed on common carriers. And although the Supreme Court has held that the Commission may treat the provision of Internet access service under Title I and still impose some degree of regulation, see *NCTA v. Brand X Internet Servs.*, 545 U.S. 967 (2005), the Court did not abandon its established precedent on the limits of the agency's ancillary authority. The Commission simply cannot use the generalized provisions of Title I to impose more onerous regulations on providers of broadband Internet access service than it is authorized to impose on common carriers under the specific provisions of Title II. *Midwest Video II*, 440 U.S. at 705–07.

Also, I respectfully disagree that Sections 230 and 706 provide the ancillary hook. See 47 U.S.C. §§ 230(b), 1302(a). Section 230(b) opens with the clause, "It is the policy of the United States . . ." While I agree with the importance of the goals set forth there, I do not read them as granting the Commission the necessary specific statutory authority to bolster further regulation through our ancillary jurisdiction powers. Additionally, Section 706(a) states that the Commission "shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." The majority view appears to be that this Section provides the Commission with authority over the regulation of network management because if such management is left unchecked by the government, some people may, by default, have less access to the Internet. If read literally, however, Section 706 means exactly what it says: that the "Commission shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." Evidence already before us suggests that imposing new regulations on the industry that must pay for broadband deployment could have the opposite effect of what Section 706 charges the Commission to do.

and I strongly encourage commenters to fill the record with solid facts and legal theories to substantiate their points of view.

Furthermore, as we go forward, I hope we can explore the differences between “discriminatory” conduct and “anticompetitive” conduct. The public interest would be better served if the debate would focus more on this dichotomy. During the course of this debate, many have confused the important difference between discriminatory conduct and anticompetitive conduct. But the reality is that the Internet can function only if engineers are allowed to *discriminate* among different types of traffic. The word “discriminate” carries with it negative connotations, but to network engineers it means “network management.” Discriminatory conduct, in the network management context, does not necessarily mean anticompetitive conduct.

For example, to enjoy online video downloads without interruption or distortion, consumers expect video bits to be given priority over other bits, such as email bits. Such conduct is discriminatory, but not necessarily anticompetitive. If discriminatory conduct were to become anticompetitive conduct, then could it not be addressed in the context of competition and antitrust laws? While today’s Notice provides an opportunity to comment on the applicability of such laws, I hope that the record will contain a relevant market analysis before we venture further. Without a finding of a concentration of market power and abuse of such power in the broadband market, additional regulation is likely not warranted.

In fact, just over two years ago the Commission launched an inquiry into the state of the broadband services market. We cast a wide net in an effort to harvest evidence of fundamental market failure, and we came up empty. Similarly, after a lengthy and thorough market analysis, the Federal Trade Commission (FTC) issued a report on the state of the broadband market just 27 months ago. In a unanimous and bipartisan 5-0 vote, the FTC strongly cautioned against imposing Internet regulation, saying:

[W]e suggest that policy makers proceed with caution in evaluating calls for network neutrality regulation No regulation, however well-intended, is cost-free, and it may be particularly difficult to avoid unintended consequences here, where the conduct at which regulation would be directed largely has not yet occurred. ... Policy makers should be very wary of network neutrality regulation.³

What tectonic market changes have occurred since the 2007 FTC report that would warrant a change in policy? Since the Supreme Court’s decision in *Brand X*, we have been busy taking broadband services out of the common carriage realm of Title II and classifying them as largely *unregulated* Title I information services due to market conditions.⁴ So an important question to ask might be to what degree would a lack of a change in market conditions threaten the viability of any new regulations on appeal?

³ Federal Trade Commission, *Broadband Connectivity Competition Policy*, 155 (2007). The FTC elaborated, “Policy makers should be very wary of network neutrality regulation simply because we do not know what the net effects of potential conduct by broadband providers will be on consumers, including, among other things, the prices that consumers may pay for Internet access, the quality of Internet access and other services that will be offered, and the choices of content and applications that may be available to consumers in the marketplace. Similarly, we do not know what net effects regulation to proscribe such conduct would have on consumers. This is the inherent difficulty in regulating based on concerns about conduct that has not occurred, especially in a dynamic marketplace.” *Id.* at 157.

⁴ See, e.g., *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of* (continued . . .)

Some point to less than a handful of troublesome actions – some several years old – by a few market players as sufficient evidence to justify a new regulatory regime. An important fact lacking in this debate is that once these actions were brought to light, however, all were resolved without imposing new regulations. Additionally, given the context of the uncountable number of Internet communications that occur every day, is such a small number of quickly resolved incidents evidence that the Internet is breaking to the point of needing more regulation?

As the Commission embarks upon this regulatory journey, we should do so with our eyes wide open regarding the potential consequences of our actions, be they beneficial or harmful and intended or unintended. For instance, the recent 700 MHz auction teaches important lessons about unintended consequences. I cast the only dissent against the open access requirements because the evidence in the record told me that the market was already headed toward offering more device and application portability. As it turns out, not only were several WiFi-enabled handsets already on the market at the time of our order, but, more importantly, several carriers, device manufacturers and application providers were working together to produce open devices and networks long before a draft of the 700 MHz order was even contemplated. At the time, I also did not think that the rule would achieve the advertised goal of attracting a new national broadband provider. Additionally, I was concerned that larger carriers would avoid the encumbered spectrum and outbid smaller players in the smaller, unregulated spectrum blocks. Sadly, my fears proved to be correct, but I wish I had been wrong. Hopefully, we can all learn from that experience: Even with the best of intentions, our rules can produce unpredictable outcomes that cause unforeseen harms.

Looking toward the future, network engineers forecast that Internet traffic will grow fivefold in the next three to four years. They also predict that when all television and video is personalized and sent over the Internet, there will be 30 times more traffic than today's network can accommodate. These traffic levels could materialize in less than 10 years, depending on how quickly user viewing habits change. Such congestion in the core requires constant and careful investment and management to ensure that consumers get the experience they expect while service providers expand their networks. Hopefully, all of us can also agree today that we will avoid adopting policies that may inadvertently stunt the growth of the network.

With that in mind, I want to again thank Chairman Genachowski for providing edits that allow for ample opportunity to comment on ways to achieve the goal of preserving an open Internet without additional regulation. Policies that promote abundance and competition serve as an antidote to potential anticompetitive conduct. If one market player were to manipulate Internet content or applications in an anticompetitive manner, sufficient competition would obviate the need for regulation by offering consumers multiple choices in "last-mile" providers. During the past few years, the Commission has worked diligently to adopt policies that have produced more last-mile competition by: making it easier for competitors to deploy fiber into American neighborhoods, auctioning new slices of the radio spectrum for powerful new broadband services and opening up the television "white spaces" for unlicensed uses.

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Enhanced Services; 1998 Biennial Regulatory Review — Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160(c) with regard to Broadband Services Provided via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided via Fiber to the Premises; Consumer Protection in the Broadband Era, WC Docket Nos. 04-242, 05-271, CC Docket Nos. 95-20, 98-10, 01-337, 02-33, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) (Wireline Broadband Order), petitions for review denied, Time Warner Telecom, Inc. v. FCC, 507 F.3d 205 (3d Cir. 2007).

In the past decade, however, most American consumers have had only two broadband platforms to choose from: a cable company and a phone company. This limited choice has produced a fear among proponents of regulation that last-mile providers could act in anticompetitive ways that limit consumer freedom on the Internet. But the reality is the days of the broadband duopoly are ending. Robust competition is budding, and more is on the way. Moreover, as we work on our National Broadband Plan for Congress, we should be mindful that investors of all sizes, as well as objective market analysts, have warned us that new regulation may frighten away critical investment capital needed to build America's broadband future.⁵

I hope that we will seriously consider the idea of having the Commission play a leadership role in helping to spotlight instances of market failure and conveying them to appropriate non-governmental collaborative bodies for review and action in an effort to avoid the unintended consequences of new regulation. This model, supported by strict enforcement of our antitrust laws, could very well provide the benefits sought by proponents of new rules without incurring the unexpected costs of a new regulatory regime.

Although I respectfully disagree with the factual and legal predicates that have produced this item today, I agree that if we are to have rules the proper way to proceed is a notice of proposed rulemaking containing the text of proposed rules. These issues are complicated and highly technical and deserve the lengthy comment period the Chairman has suggested. The longer time frame may also allow us to receive guidance from the court on our legal authority to proceed as may be decided in the *Comcast/BitTorrent* appeal.⁶

Let me reiterate that this is the beginning of a process. No irreversible decisions have been made. We have started a debate in the context of a healthy process. We can agree in part and disagree in part and be respectful and collegial about it all. I hope that all of us are entering into this with open minds that can be changed purely by the facts and law. I also thank the staff for their openness to ideas, hard work and diligence in preparing this Notice.

So it is in this spirit of collegiality and good faith that I respectfully dissent in part (on the factual and legal predicates) and concur in part (on the process).

But instead of ending on that note, let me close with a quote from someone we all know and who had a great deal of influence over how the Internet became privatized.

Though government played a role in financing the initial development of the Internet, its expansion has been driven primarily by the private sector. For electronic commerce to flourish, the private sector must continue to lead. Innovation, expanded services, broader participation, and lower prices will arise in a market-driven arena, not in an environment that operates as a regulated industry.

Accordingly, governments should encourage industry self-regulation wherever appropriate and support the efforts of private sector organizations to develop mechanisms to facilitate the successful operation of the Internet. Even where collective agreements or

⁵ See FCC Hearing on Capital Formation in the Broadband Sector (Oct. 1, 2009). Webcast located at http://www.fcc.gov/live/2009_10_01-workshop.html.

⁶ See *Comcast Corporation v. FCC*, No. 08-1291 (D.C. Cir. Sept. 4, 2008).

standards are necessary, private entities should, where possible, take the lead in organizing them.⁷

This, of course, comes from the Presidential Directive announcing the “Framework for Global Electronic Commerce” signed by President Bill Clinton in 1997. As we go forward, I think it may be advice worth heeding.

⁷ Memorandum from the White House Office of the Press Secretary to the Heads of Executive Departments and Agencies (July 1, 1997).

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52

Many years ago – long before the Internet became what it is today – I owned and operated a small business in Charleston, South Carolina. That business – a weekly newspaper called *The Coastal Times* – primarily focused on issues affecting the African-American community. As a small business owner, I participated in every aspect of the newspaper. I wrote and edited articles. I sold advertising. I hired and managed employees. No task was too big or too small. Building *The Coastal Times* from the ground up was a painstaking process, but a labor of love.

There was one underlying reality I could not escape, however. No matter what I did – no matter how many hours I put in or what kind of product I produced – I could never achieve an equal footing with the region’s larger media outlets. The costs of entry were far too great. As one small example, while the traditional newspapers could afford their established distribution networks to deliver their product, my “distribution network” was me and my 1992 GMC Jimmy.

In the end, the cost of doing business for a smaller outfit like mine proved to be insurmountable. So after 14 years of sweat, tears and some . . . well you get the picture, *The Coastal Times* newspaper published its final issue, and a voice in an underrepresented community fell silent.

I offer this personal story because the substance of this proceeding reminds me of my challenges in running *The Coastal Times*. I cannot help but wonder . . . what if I had a web site – let’s call it “thecoastaltimes.com” – and how would that have changed the outcome? One thing is certain – my distribution challenge would have been greatly diminished. All things considered, on-line the publication’s success or failure would have been far more likely to be determined by the quality of the product, rather than how well capitalized it was.

This web-based scenario assumes, however – as does every Internet success story out there today – an open platform. Because if my larger competitors were simply able to buy their way ahead of my small publication – if my content were delivered at inferior speeds and/or quality – then thecoastaltimes.com would simply be an on-line version of my old GMC Jimmy with its three hundred-plus thousand miles.

An open Internet is, perhaps as much as anything else, “the great equalizer.” It allows people with innovative ideas to succeed on the merit of those ideas. It also provides a voice to those who often are not afforded one. Smaller businesses can compete despite not being firmly established or well financed on day one. The quality of the product or opinion stands for itself, and consumers are the ultimate arbiters of which businesses thrive at the end of the day.

To me, that is what this proceeding is all about: preventing barriers to entry and ensuring that Americans have access to the best and most useful information and services. And that is why I am pleased to support this item. I believe that preserving an open Internet is essential, not only to safeguard everything that the Internet does for us today, but also to help address current challenges, such as the digital divide.

I would be remiss if I did not take a moment to address the process going forward. First, I applaud the Chairman for his thoughtful and open approach to this issue. After working closely with each of our offices, and after listening to some of the constructive feedback offered by outside parties, the

Chairman and his staff made some important changes that have significantly strengthened the Notice. This process has brought us closer to developing open Internet rules that will foster innovation and investment, promote competition, and most importantly, protect consumers.

Second, I want to emphasize that I am eager to see a thoughtful, rational, and respectful record in this proceeding. Our field has so many talented people with great minds who can help us make this undertaking a success. As we have recently seen, collaboration among disparate parties is certainly possible.

Unfortunately, some parties seem to prefer radioactive rhetoric and unseemly and unbecoming tactics. Such an approach may yield headlines, but will not yield positive results with me.

So let us permit our better selves to emerge during this process. Together, we can develop clear and reasonable rules of the road for industry, and ensure that we have a robust Internet that continues to drive the economy and provide countless benefits for the American consumer. For my part, I pledge to look at the record with an open mind, and to treat each submission with the seriousness it deserves. I am looking forward to an honest, open, and direct exchange to make sure we get this proceeding right.

I would like to thank the staff for their truly excellent work on this item. I look forward to working with them, and with my fellow Commissioners, as we proceed toward final rules to preserve an open Internet and solidify the foundation for economic prosperity in the days ahead.

**STATEMENT OF
COMMISSIONER MEREDITH A. BAKER
CONCURRING IN PART, DISSENTING IN PART**

Re: *In the Matter of Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, WC Docket No. 07-52

I believe in the Open Internet and the free flow of lawful content over the Internet. Of course, we all do. The unrestricted flow of information on the Internet has enabled unprecedented innovation and investment in communications technologies and services, and brought immeasurable benefits to consumers of all kinds. I don't want to do anything that would jeopardize that.

I think we must cast a watchful eye to the nascent Internet ecosystem, a complex and rapidly evolving force that empowers whole new ways of doing business, new technologies, new ideas, and new jobs. I don't want anything to get in the way of that.

I also believe that we must never cease to find ways to create incentives for investment across the Internet, an economic engine that is just beginning to demonstrate its power to transform the way we live, to energize our economy and to solidify our leadership internationally.

I believe very strongly that openness must thrive across the Internet as a whole. We must find ways to enable innovation and investment from end-to-end—not just applications at the edge but also the network's vibrant, dynamic and technologically evolving core. This is important because if innovation and investment are confined to corners of the Internet, consumers will suffer.

I am particularly sensitive to the fact that all actions that we take at the Commission are carefully watched, not only here, but also abroad, to gauge the future of the Internet. When I think of an open Internet in the international context, I think of the importance of the free flow of all types of lawful information over the Internet, which the United States has championed since the early days of the Clinton Administration.

It is the openness we sought to preserve in rigorous discussions with the leaders of other countries around the world while I was at NTIA, and the openness we upheld during the World Summit on the Information Society process and the openness we fought hard to capture in the Tunis Commitment.¹ I believe that those freedoms—that openness—are no less relevant today, and the role the United States plays in defending them remains critical. We cannot retreat. On this there is no disagreement at this Commission and I make this point lest the rest of the world should get the wrong idea.

I dissent in part today because, as a threshold matter, I am not convinced that there is a sufficient record to establish that a problem exists that should be addressed by Commission rules. As I have said previously, we should not adopt regulations to address anecdotes where there is no fact-based evidence that persuasively demonstrates the presence of a problem. My concerns about the need to regulate are heightened in several of the areas that are covered by the item before us today.

¹ Tunis Commitment, World Summit on the Information Society, September 2003-October 2005, ITU Doc. WSIS-05/TUNIS/DOC/7-E, Nov. 18, 2005, available at <http://www.itu.int/wsis/docs2/tunis/off/7.html> (last visited Oct. 21, 2009).

We must be particularly careful before we risk extending any Internet principles to mobile broadband, which is rapidly becoming the driving force in Internet uptake and use. We need to look hard at what we are proposing to call “specialized” or “managed” services, and whether codifying rules will thwart or encourage their development. We need to know much more about the parameters of reasonable network management before we consider acting, and the same is true for the concept of discrimination.

I also think that important questions are outstanding about our legal authority to regulate broadband Internet access services that we need to explore. We need to better understand the law, engineering, and economics. Before imposing new rules, we need to carefully think through all potential unintended consequences that could harm consumers by increasing prices, impeding innovation, eliminating choices, and/or reducing quality of service.

For these reasons, when we began this process three weeks ago, I was prepared to dissent with respect to this entire initiative. But I am not there today. Although I am not convinced that rules are necessary or useful at this time, I am now equally convinced that it is reasonable to take a step back and ask tough and probing questions about the Internet as it exists today and about where we want it to be tomorrow. And I realize that this is the start of the process.

I hope for broad and substantive participation in this proceeding, so that we will have a solid record that will provide us with a complete and accurate understanding of the Internet ecosystem. I support that effort and I think the item includes thoughtful questions to direct the debate to come. I want to thank Chairman Genachowski and his staff for their good faith efforts to make this a better document. I commend the Chairman for putting action behind his commitment to a cooperative approach at the Commission and his emphasis on fact-based policy analysis founded on evidence in an open and transparent record.

I hope this will set us on a constructive road for working together to make better communications policy in the months and years ahead. There are already encouraging signs that this will prove to be a productive approach outside the Commission as well. As a member of the minority at the Commission, I appreciate that we have demonstrated that we can disagree without being disagreeable where our policy perspectives just cannot line up.

I particularly want to acknowledge the steps that the Chairman is proposing to ensure that there is an ample record upon which we can move forward. I note, in particular, the extended comment period that has been proposed, as well as the establishment of a technical advisory process to make sure that the steps that we take in the future are informed by the laws of physics, not merely the laws of politics. I look forward to having the chance to hear from the business people—both large and small—from the inventors and the technical experts, and to working together to achieve a broad-based consensus with respect to the way forward. With input from a broad range of parties who are willing to roll up their sleeves and work together, I believe we can find the right way.

Finally, I would be remiss to not recognize the tremendous job that the staff across the Commission—in the Bureaus, in the Chairman’s office in my office and the offices of the other Commissioners—have done to move this document forward. It reflects real progress over the past few weeks and the kind of constructive collaboration that I hope will become the hallmark of the workings of this Commission.

While I remain skeptical about the need for regulation here, I also remain open to new ideas and look forward to reviewing the record to be developed here. I believe the document before us today outlines a thoughtful process to develop a record to inform our next steps. It is balanced and

comprehensive. It asks good, pertinent questions and offers suggestions about a flexible approach in the future that is worth considering carefully and at length. Thank you.