## FEDERAL COMMUNICATIONS COMMISSION

### 47 CFR Parts 0 and 8

**[GN Docket No. 09–191; WC Docket No. 07–52; FCC 10–201]**

## Preserving the Open Internet

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** This Report and Order establishes protections for broadband service to preserve and reinforce Internet freedom and openness. The Commission adopts three basic protections that are grounded in broadly accepted Internet norms, as well as our own prior decisions. First, transparency: fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and commercial terms of their broadband services. Second, no blocking: fixed broadband providers may not block lawful content, applications, services, or non-harmful devices; mobile broadband providers may not block lawful Web sites, or block applications that compete with their voice or video telephony services. Third, no unreasonable discrimination: fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic. These rules, applied with the complementary principle of reasonable network management, ensure that the freedom and openness that have enabled the Internet to flourish as an engine for creativity and commerce will continue. This framework thus provides greater certainty and predictability to consumers, innovators, investors, and broadband providers, as well as the flexibility providers need to effectively manage their networks. The framework promotes a virtuous circle of innovation and investment in which new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements that in turn lead to further innovative network uses.

**DATES:** *Effective Date:* These rules are effective November 20, 2011.

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**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Report and Order (Order) in GN Docket No. 09–191, WC Docket No. 07–52, FCC 10–201, adopted December 21, 2010 and released December 23, 2010. The complete text of this document is available on the Commission's Web site at *http://www.fcc.gov*. It is also available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW., Room CY–A257, Washington, DC 20554. This document may also be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY–B402, Washington, DC 20554, telephone (800) 378–3160 or (202) 863–2893, facsimile (202) 863–2898, or via e-mail at *http://www.bcpiweb.com*.

### Synopsis of the Order

### I. Preserving the Free and Open Internet

In this Order the Commission takes an important step to preserve the Internet as an open platform for innovation, investment, job creation, economic growth, competition, and free expression. To provide greater clarity and certainty regarding the continued freedom and openness of the Internet, we adopt three basic rules that are grounded in broadly accepted Internet norms, as well as our own prior decisions:

i. *Transparency.* Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services;

ii. *No blocking.* Fixed broadband providers may not block lawful content, applications, services, or non-harmful devices; mobile broadband providers may not block lawful Web sites, or block applications that compete with their voice or video telephony services; and

iii. *No unreasonable discrimination.* Fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic.

We believe these rules, applied with the complementary principle of reasonable network management, will empower and protect consumers and innovators while helping ensure that the Internet continues to flourish, with robust private investment and rapid innovation at both the core and the edge of the network. This is consistent with the National Broadband Plan goal of broadband access that is ubiquitous and fast, promoting the global competitiveness of the United States.

In late 2009, we launched a public process to determine whether and what actions might be necessary to preserve the characteristics that have allowed the Internet to grow into an indispensable platform supporting our nation's economy and civic life, and to foster continued investment in the physical networks that enable the Internet. Since then, more than 100,000 commenters have provided written input. Commission staff held several public workshops and convened a Technological Advisory Process with experts from industry, academia, and consumer advocacy groups to collect their views regarding key technical issues related to Internet openness.

This process has made clear that the Internet has thrived because of its freedom and openness—the absence of any gatekeeper blocking lawful uses of the network or picking winners and losers online. Consumers and innovators do not have to seek permission before they use the Internet to launch new technologies, start businesses, connect with friends, or share their views. The Internet is a level playing field. Consumers can make their own choices about what applications and services to use and are free to decide what content they want to access, create, or share with others. This openness promotes competition. It also enables a self-reinforcing cycle of investment and innovation in which new uses of the network lead to increased adoption of broadband, which drives investment and improvements in the network itself, which in turn lead to further innovative uses of the network and further investment in content, applications, services, and devices. A core goal of this Order is to foster and accelerate this cycle of investment and innovation.

The record and our economic analysis demonstrate, however, that the openness of the Internet cannot be taken for granted, and that it faces real threats. Indeed, we have seen broadband providers endanger the Internet's openness by blocking or degrading content and applications without disclosing their practices to end users and edge providers, notwithstanding the Commission's adoption of open Internet principles in 2005.[1] In light of these considerations, as well as the limited choices most consumers have for broadband service, broadband

[1] In this Order we use ''broadband'' and ''broadband Internet access service'' interchangeably, and ''broadband provider'' and ''broadband Internet access provider'' interchangeably. ''End user'' refers to any individual or entity that uses a broadband Internet access service; we sometimes use ''subscriber'' or ''consumer'' to refer to those end users that subscribe to a particular broadband Internet access service. We use ''edge provider'' to refer to content, application, service, and device providers, because they generally operate at the edge rather than the core of the network. These terms are not mutually exclusive.

providers' financial interests in telephony and pay television services that may compete with online content and services, and the economic and civic benefits of maintaining an open and competitive platform for innovation and communication, the Commission has long recognized that certain basic standards for broadband provider conduct are necessary to ensure the Internet's continued openness. The record also establishes the widespread benefits of providing greater clarity in this area—clarity that the Internet's openness will continue, that there is a forum and procedure for resolving alleged open Internet violations, and that broadband providers may reasonably manage their networks and innovate with respect to network technologies and business models. We expect the costs of compliance with our prophylactic rules to be small, as they incorporate longstanding openness principles that are generally in line with current practices and with norms endorsed by many broadband providers. Conversely, the harms of open Internet violations may be substantial, costly, and in some cases potentially irreversible.

The rules we proposed in the *Open Internet NPRM* and those we adopt in this Order follow directly from the Commission's bipartisan *Internet Policy Statement,* adopted unanimously in 2005 and made temporarily enforceable for certain broadband providers in 2005 and 2007; openness protections the Commission established in 2007 for users of certain wireless spectrum; and a notice of inquiry in 2007 that asked, among other things, whether the Commission should add a principle of nondiscrimination to the *Internet Policy Statement.* Our rules build upon these actions, first and foremost by requiring broadband providers to be transparent in their network management practices, so that end users can make informed choices and innovators can develop, market, and maintain Internet-based offerings. The rules also prevent certain forms of blocking and discrimination with respect to content, applications, services, and devices that depend on or connect to the Internet.

An open, robust, and well-functioning Internet requires that broadband providers have the flexibility to reasonably manage their networks. Network management practices are reasonable if they are appropriate and tailored to achieving a legitimate network management purpose. Transparency and end-user control are touchstones of reasonableness.

We recognize that broadband providers may offer other services over the same last-mile connections used to provide broadband service. These ''specialized services'' can benefit end users and spur investment, but they may also present risks to the open Internet. We will closely monitor specialized services and their effects on broadband service to ensure, through all available mechanisms, that they supplement but do not supplant the open Internet.

Mobile broadband is at an earlier stage in its development than fixed broadband and is evolving rapidly. For that and other reasons discussed below, we conclude that it is appropriate at this time to take measured steps in this area. Accordingly, we require mobile broadband providers to comply with the transparency rule, which includes enforceable disclosure obligations regarding device and application certification and approval processes; we prohibit providers from blocking lawful Web sites; and we prohibit providers from blocking applications that compete with providers' voice and video telephony services. We will closely monitor the development of the mobile broadband market and will adjust the framework we adopt in this Order as appropriate.

These rules are within our jurisdiction over interstate and foreign communications by wire and radio. Further, they implement specific statutory mandates in the Communications Act (''Act'') and the Telecommunications Act of 1996 (''1996 Act''), including provisions that direct the Commission to promote Internet investment and to protect and promote voice, video, and audio communications services.

The framework we adopt aims to ensure the Internet remains an open platform—one characterized by free markets and free speech—that enables consumer choice, end-user control, competition through low barriers to entry, and the freedom to innovate without permission. The framework does so by protecting openness through high-level rules, while maintaining broadband providers' and the Commission's flexibility to adapt to changes in the market and in technology as the Internet continues to evolve.

## II. The Need for Open Internet Protections

In the *Open Internet NPRM* (FCC 09–93 published at 74 FR 62638, November 30, 2009), we sought comment on the best means for preserving and promoting a free and open Internet. We noted the near-unanimous view that the Internet's openness and the transparency of its protocols have been critical to its unparalleled success. Citing evidence of broadband providers covertly blocking or degrading Internet traffic, and concern that broadband providers have the incentive and ability to expand those practices in the near future, we sought comment on prophylactic rules designed to preserve the Internet's prevailing norms of openness. Specifically, we sought comment on whether the Commission should codify the four principles stated in the *Internet Policy Statement,* plus proposed nondiscrimination and transparency rules, all subject to reasonable network management.[2]

Commenters agree that the open Internet is an important platform for innovation, investment, competition, and free expression, but disagree about whether there is a need for the Commission to take action to preserve its openness. Commenters who favor Commission action emphasize the risk of harmful conduct by broadband providers, and stress that failing to act could result in irreversible damage to the Internet. Those who favor inaction contend that the Internet generally is open today and is likely to remain so, and express concern that rules aimed at preventing harms may themselves impose significant costs. In this part, we assess these conflicting views. We conclude that the benefits of ensuring Internet openness through enforceable, high-level, prophylactic rules outweigh the costs. The harms that could result from threats to openness are significant and likely irreversible, while the costs of compliance with our rules should be small, in large part because the rules appear to be consistent with current industry practices. The rules are carefully calibrated to preserve the benefits of the open Internet and increase certainty for all Internet stakeholders, with minimal burden on broadband providers.

### *A. The Internet's Openness Promotes Innovation, Investment, Competition, Free Expression, and Other National Broadband Goals*

Like electricity and the computer, the Internet is a ''general purpose technology'' that enables new methods of production that have a major impact on the entire economy. The Internet's founders intentionally built a network that is open, in the sense that it has no gatekeepers limiting innovation and

[2] The *Open Internet NPRM* recast the *Internet Policy Statement* principles as rules rather than consumer entitlements, but did not change the fact that protecting and empowering end users is a central purpose of open Internet protections.

communication through the network.[3] Accordingly, the Internet enables an end user to access the content and applications of her choice, without requiring permission from broadband providers. This architecture enables innovators to create and offer new applications and services without needing approval from any controlling entity, be it a network provider, equipment manufacturer, industry body, or government agency. End users benefit because the Internet's openness allows new technologies to be developed and distributed by a broad range of sources, not just by the companies that operate the network. For example, Sir Tim Berners-Lee was able to invent the World Wide Web nearly two decades after engineers developed the Internet's original protocols, without needing changes to those protocols or any approval from network operators. Startups and small businesses benefit because the Internet's openness enables anyone connected to the network to reach and do business with anyone else, allowing even the smallest and most remotely located businesses to access national and global markets, and contribute to the economy through e-commerce [4] and online advertising.[5] Because Internet openness enables widespread innovation and allows all end users and edge providers (rather than just the significantly smaller number of broadband providers) to create and determine the success or failure of content, applications, services, and devices, it maximizes commercial and non-commercial innovations that address key national challenges—including improvements in health care, education, and energy efficiency that benefit our economy and civic life.

The Internet's openness is critical to these outcomes, because it enables a virtuous circle of innovation in which new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses. Novel, improved, or lower-cost offerings introduced by content, application, service, and device providers spur end-user demand and encourage broadband providers to expand their networks and invest in new broadband technologies.[6] Streaming video and e-commerce applications, for instance, have led to major network improvements such as fiber to the premises, VDSL, and DOCSIS 3.0. These network improvements generate new opportunities for edge providers, spurring them to innovate further.[7] Each round of innovation increases the value of the Internet for broadband providers, edge providers, online businesses, and consumers. Continued operation of this virtuous circle, however, depends upon low barriers to innovation and entry by edge providers, which drive end-user demand. Restricting edge providers' ability to reach end users, and limiting end users' ability to choose which edge providers to patronize, would reduce the rate of innovation at the edge and, in turn, the likely rate of improvements to network infrastructure. Similarly, restricting the ability of broadband providers to put the network to innovative uses may reduce the rate of improvements to network infrastructure.

Openness also is essential to the Internet's role as a platform for speech and civic engagement. An informed electorate is critical to the health of a functioning democracy, and 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.'' Due to the lack of gatekeeper control, the Internet has become a major source of news and information, which forms the basis for informed civic discourse. Many Americans now turn to the Internet to obtain news,[8] and its openness makes it an unrivaled forum for free expression. Furthermore, local, State, and Federal government agencies are increasingly using the Internet to communicate with the public, including to provide information about and deliver essential services.

Television and radio broadcasters now provide news and other information online via their own Web sites, online aggregation Web sites such as Hulu, and social networking platforms. Local broadcasters are experimenting with new approaches to delivering original content, for example by creating neighborhood-focused Web sites; delivering news clips via online video programming aggregators, including AOL and Google's YouTube; and offering news from citizen journalists. In addition, broadcast networks license their full-length entertainment programs for downloading or streaming to edge providers such as Netflix and Apple.

[3] The Internet's openness is supported by an ''end-to-end'' network architecture that was formulated and debated in standard-setting organizations and foundational documents. *See, e.g.,* WCB Letter 12/10/10, Attach. at 17–29, Vinton G. Cerf & Robert E. Kahn, *A Protocol for Packet Network Interconnection,* COM–22 IEEE Transactions of Commc'ns Tech. 637–48 (1974); WCB Letter 12/10/10, Attach. at 30–39, J.H. Saltzer *et al., End to End Arguments in System Design,* Second Int'l Conf. on Distributed Computing Systems, 509–12 (1981); WCB Letter 12/10/10, Attach. at 49–55, B. Carpenter, Internet Engineering Task Force (''IETF''), *Architectural Principles of the Internet,* RFC 1958, 1–8 (June 1996), *http://www.ietf.org/rfc/rfc1958.txt;* Lawrence Roberts, *Multiple Computer Networks and Intercomputer Communication,* ACM Symposium on Operation System Principles (1967). Under the end-to-end principle, devices in the middle of the network are not optimized for the handling of any particular application, while devices at network endpoints perform the functions necessary to support networked applications and services. *See generally* WCB Letter 12/10/10, Attach. at 40–48, J. Kempf & R. Austein, IETF, *The Rise of the Middle and the Future of End-to-End: Reflections on the Evolution of the Internet Architecture,* RFC 3724, 1–14 (March 2004), *ftp://ftp.rfc-editor.org/in-notes/rfc3724.txt.*

[4] Business-to-consumer e-commerce was estimated to total $135 billion in 2009. *See* WCB Letter 12/10/10, Attach. at 81–180, Robert D. Atkinson *et al., The Internet Economy 25 Years After.com,* Info. Tech. & Innovation Found., at 24 (March 2010), *available at http://www.itif.org/files/2010-25-years.pdf.*

[5] The advertising-supported Internet sustains about $300 billion of U.S. GDP. *See* Google Comments at 7.

[6] We note that broadband providers can also be edge providers.

[7] For example, the increasing availability of multimedia applications on the World Wide Web during the 1990s was one factor that helped create demand for residential broadband services. Internet service providers responded by adopting new network infrastructure, modem technologies, and network protocols, and marketed broadband to residential customers. *See, e.g.,* WCB Letter 12/13/10, Attach. at 250–72, Chetan Sharma, *Managing Growth and Profits in the Yottabyte Era* (2009), *http://www.chetansharma.com/yottabyteera.htm* (Yottabyte). By the late 1990s, a residential end user could download content at speeds not achievable even on the Internet backbone during the 1980s. *See, e.g.,* WCB Letter 12/13/10, Attach. at 226–32, Susan Harris & Elise Gerich, *The NSFNET Backbone Service: Chronicling the End of an Era,* 10 ConneXions (April 1996), *available at http://www.merit.edu/networkresearch/projecthistory/nsfnet/nsfnet_article.php.* Higher speeds and broadband's ''always on'' capability, in turn, stimulated more innovation in applications, from gaming to video streaming, which in turn encouraged broadband providers to increase network speeds. WCB Letter 12/13/10, Attach. at 233–34, Link Hoewing, *Twitter, Broadband and Innovation,* PolicyBlog, Dec. 4, 2010, *policyblog.verizon.com/BlogPost/626/TwitterBroadbandandInnovation.aspx.*

[8] *See* WCB Letter 12/10/10, Attach. at 133–41, Pew Research Ctr. for People and the Press, Americans Spend More Time Following the News; Ideological News Sources: Who Watches and Why 17, 22 (Sept. 12, 2010), *people-press.org/report/652/* (stating that ''44% of Americans say they got news through one or more Internet or mobile digital source yesterday''); WCB Letter 12/10/10, Attach. at 131–32, TVB Local Media Marketing Solutions, Local News: Local TV Stations are the Top Daily News Source, *http://www.tvb.org/planning_buying/120562* (estimating that 61% of Americans get news from the Internet) (''*TVB*''). However, according to the Pew Project for Excellence in Journalism, the majority of news that people access online originates from legacy media. *See* Pew Project for Excellence in Journalism, The State of the News Media: An Annual Report on American Journalism (2010), *http://www.stateofthemedia.org/2010/overview_key_findings.php* (''Of news sites with half a million visitors a month (or the top 199 news sites once consulting, government and information data bases are removed), 67% are from legacy media, most of them (48%) newspapers.'').

Because these sites are becoming increasingly popular with the public, online distribution has a strategic value for broadcasters, and is likely to provide an increasingly important source of funding for broadcast news and entertainment programming.

Unimpeded access to Internet distribution likewise has allowed new video content creators to create and disseminate programs without first securing distribution from broadcasters and multichannel video programming distributors (MVPDs) such as cable and satellite television companies. Online viewing of video programming content is growing rapidly.[9]

In the *Open Internet NPRM,* the Commission sought comment on possible implications that the proposed rules 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.'' As we noted in the *Open Internet NPRM,* according to a 2009 study, broadband adoption varies significantly across demographic groups.[10] We expect that open Internet protections will help close the digital divide by maintaining relatively low barriers to entry for underrepresented groups and allowing for the development of diverse content, applications, and services.[11]

For all of these reasons, there is little dispute in this proceeding that the Internet should continue as an open platform. Accordingly, we consider below whether we can be confident that the openness of the Internet will be self-perpetuating, or whether there are threats to openness that the Commission can effectively mitigate.

### *B. Broadband Providers Have the Incentive and Ability to Limit Internet Openness*

For purposes of our analysis, we consider three types of Internet activities: providing broadband Internet access service; providing content, applications, services, and devices accessed over or connected to broadband Internet access service (''edge'' products and services); and subscribing to a broadband Internet access service that allows access to edge products and services. These activities are not mutually exclusive. For example, individuals who generate and share content such as personal blogs or Facebook pages are both end users and edge providers, and a single firm could both provide broadband Internet access service and be an edge provider, as with a broadband provider that offers online video content. Nevertheless, this basic taxonomy provides a useful model for evaluating the risk and magnitude of harms from loss of openness.

The record in this proceeding reveals that broadband providers potentially face at least three types of incentives to reduce the current openness of the Internet. *First,* broadband providers may have economic incentives to block or otherwise disadvantage specific edge providers or classes of edge providers, for example by controlling the transmission of network traffic over a broadband connection, including the price and quality of access to end users. A broadband provider might use this power to benefit its own or affiliated offerings at the expense of unaffiliated offerings.

Today, broadband providers have incentives to interfere with the operation of third-party Internet-based services that compete with the providers' revenue-generating telephony and/or pay-television services. This situation contrasts with the first decade of the public Internet, when dial-up was the primary form of consumer Internet access. Independent companies such as America Online, CompuServe, and Prodigy provided access to the Internet over telephone companies' phone lines. As broadband has replaced dial-up, however, telephone and cable companies have become the major providers of Internet access service. Online content, applications, and services available from edge providers over broadband increasingly offer actual or potential competitive alternatives to broadband providers' own voice and video services, which generate substantial profits. Interconnected Voice-over-Internet-Protocol (VoIP) services, which include some over-the-top VoIP services,[12] ''are increasingly being used as a substitute for traditional telephone service,'' [13] and over-the-top

[9] *See* Google Comments at 28; Motorola Comments at 5; MPAA Comments at 5–6; DISH Reply at 4–5; WCB Letter 12/10/10, Attach. at 22–23, *Online Video Goes Mainstream,* eMarketer, Apr. 28, 2010, *http://www.emarketer.com/Article.aspx?R=1007664* (estimating that 29% of Internet users younger than 25 say they watch all or most of their TV online, that as of April 2010 67% of U.S. Internet users watch online video each month, and that this figure will increase to 77% by 2014); WCB Letter 12/10/10, Attach. at 20–21, Chris Nuttall, *Web TVs bigger for manufacturers than 3D,* Financial Times, Aug. 29, 2010, *http://www.ft.com/cms/s/2/0b34043a-9fe3-11df-8cc5-00144feabdc0.html* (stating that 28 million Internet-enabled TV sets are expected to be sold in 2010, an increase of 125% from 2009); WCB Letter 12/13/10, Attach. at 291–92, Sandvine, News and Events: Press Releases, *http://www.sandvine.com/news/pr_detail.asp?ID=288* (estimating that Netflix represents more than 20% of peak downstream Internet traffic). Cisco expects online viewing to exert significant influence on future demand for broadband capacity, ranking as the top source of Internet traffic by the end of 2010 and accounting for 91% of global Internet traffic by 2014. WCB Letter 12/10/10, Attach. at 40–42, Press Release, Cisco, Annual Cisco Visual Networking Index Forecast Projects Global IP Traffic To Increase More than Fourfold by 2014 (June 10, 2010), *http://www.cisco.com/web/MT/news/10/news_100610.html.*

[10] *See* Pew Internet & Am. Life Project, Home Broadband Adoption (June 2009). Approximately 14 to 24 million Americans remain without broadband access capable of meeting the requirements set forth in Section 706 of the Telecommunications Act of 1996, as amended. *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act et al.,* Sixth Broadband Deployment Report, 25 FCC Rcd 9556, 9557, para. 1 (2010) (*Sixth Broadband Deployment Report*).

[11] For example, Jonathan Moore founded Rowdy Orbit IPTV, an online platform featuring original programming for minority audiences, because he was frustrated by the lack of representation of people of color in traditional media. Dec. 15, 2009 Workshop Tr. at 39–40, *video available at http://www.openinternet.gov/workshops/speech-democratic-engagement-and-the-open-internet.html.* The Internet's openness—and the low costs of online entry—enables businesses like Rowdy Orbit to launch without having to gain approval from traditional media gatekeepers. *Id.* We will closely monitor the effects of the open Internet rules we adopt in this Order on the digital divide and on minority and disadvantaged consumers. *See generally* ColorOfChange Comments; Dec. 15, 2009 Workshop Tr. at 52–60 (remarks of Ruth Livier, YLSE); 100 Black Men of America *et al.* Comments at 1–2; Free Press Comments at 134–36; Center for Media Justice *et al.* Comments at 7–9.

[12] The Commission's rules define interconnected VoIP as ''a service that: (1) Enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet protocol-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.'' 47 CFR 9.3. Over-the-top VoIP services require the end user to obtain broadband transmission from a third-party provider, and providers of over-the-top VoIP can vary in terms of the extent to which they rely on their own facilities. *See SBC Commc'ns 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, 18337–38, para. 86 (2005).

[13] *Tel. Number Requirements for IP-Enabled Servs. Providers,* Report and Order, Declaratory Ruling, Order on Remand, and NPRM, 22 FCC Rcd 19531, 19547, para. 28 (2007); *see also* Vonage Comments at 3–4. In merger reviews and forbearance petitions, the Commission has found the record ''inconclusive regarding the extent to which various over-the-top VoIP services should be included in the relevant product market for [mass market] local services.'' *See, e.g., Verizon Commc'ns Inc. and MCI, Inc. Application for Approval of Transfer of Control,* Memorandum Opinion and Order, 20 FCC Rcd 18433, 18480, para. 89 (2005); *see also Petition of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. sec. 160(c) in the Phoenix, Arizona Metropolitan Statistical Area,* Memorandum Opinion and Order, 25 FCC Rcd 8622, 8650, para. 54 (2010) (*Qwest Phoenix Order*). In contrast to those proceedings, we are not performing a market power analysis in this

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VoIP services represent a significant share of voice-calling minutes, especially for international calls. Online video is rapidly growing in popularity, and MVPDs have responded to this trend by enabling their video subscribers to use the Internet to view their programming on personal computers and other Internet-enabled devices. Online video aggregators such as Netflix, Hulu, YouTube, and iTunes that are unaffiliated with traditional MVPDs continue to proliferate and innovate, offering movies and television programs (including broadcast programming) on demand, and earning revenues from advertising and/or subscriptions. Several MVPDs have stated publicly that they view these services as a potential competitive threat to their core video subscription service. Thus, online edge services appear likely to continue gaining subscribers and market significance,[14] which will put additional competitive pressure on broadband providers' own services. By interfering with the transmission of third parties' Internet-based services or raising the cost of online delivery for particular edge providers, telephone and cable companies can make those services less attractive to subscribers in comparison to their own offerings.

In addition, a broadband provider may act to benefit edge providers that have paid it to exclude rivals (for example, if one online video site were to contract with a broadband provider to deny a rival video site access to the broadband provider's subscribers). End users would be harmed by the inability to access desired content, and this conduct could lead to reduced innovation and fewer new services.[15] Consistent with these concerns, delivery networks that are vertically integrated with content providers, including some MVPDs, have incentives to favor their own affiliated content.[16] If broadband providers had historically favored their own affiliated businesses or those incumbent firms that paid for advantageous access to end users, some innovative edge providers that have today become major Internet businesses might not have been able to survive.

*Second,* broadband providers may have incentives to increase revenues by charging edge providers, who already pay for their own connections to the Internet, for access or prioritized access to end users. Although broadband providers have not historically imposed such fees, they have argued they should be permitted to do so. A broadband provider could force edge providers to pay inefficiently high fees because that broadband provider is typically an edge provider's only option for reaching a particular end user.[17] Thus broadband providers have the ability to act as gatekeepers.[18]

Broadband providers would be expected to set inefficiently high fees to edge providers because they receive the benefits of those fees but are unlikely to fully account for the detrimental impact on edge providers' ability and incentive to innovate and invest, including the possibility that some edge providers might exit or decline to enter the market. The unaccounted-for harms to innovation are negative externalities,[19] and are likely to be particularly large because of the rapid pace of Internet innovation, and wide-ranging because of the role of the Internet as a general purpose technology. Moreover, fees for access or prioritized access could trigger an ''arms race'' within a given edge market segment. If one edge provider pays for access or prioritized access to end users, subscribers may tend to favor that provider's services, and competing edge providers may feel that they must respond by paying, too.

Fees for access or prioritization to end users could reduce the potential profit

proceeding, so we need not and do not here determine with specificity whether, and to what extent, particular over-the-top VoIP services constrain particular practices and/or rates of services governed by Section 201. *Cf. Qwest Phoenix Order,* 25 FCC Rcd at 8647–48, paras. 46–47 (discussing the general approach to product market definition); *id.* at 8651–52, paras. 55–56 (discussing the need for evidence that one service constrains the price of another service to include them in the same product market for purposes of a market power analysis).

[14] *See, e.g.,* WCB Letter 12/10/10, Attach. at 5763, Ryan Fleming, *New Report Shows More People Dropping Cable TV for Web Broadcasts,* Digital Trends, Apr. 16, 2010, *available at http://www.digitaltrends.com/computing/new-report-shows-that-more-and-more-people-are-dropping-cable-tv-in-favor-of-web-broadcasts.* Congress recently recognized these developments by expanding disabilities access requirements to include advanced communications services. *See* Twenty-First Century Communications and Video Accessibility Act, Public Law 111–260; *see also* 156 CONG. REC. 6005 (daily ed. July 26, 2010) (remarks of Rep. Waxman) (this legislation before us * * * ensur[es] that Americans with disabilities can access the latest communications technology.); *id.* at 6004 (remarks of Rep. Markey) (''[T]he bill we are considering today significantly increases accessibility for Americans with disabilities to the indispensable telecommunications * * * tools of the 21st century.''); Letter from Rick Chessen, NCTA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09–191 at 2 n.6 (filed Dec. 10, 2010).

[15] *See generally* WCB Letter 12/10/10, Attach. at 23–27, Steven C. Salop & David Scheffman, *Raising Rivals' Cost,* 73 Am. Econ. Rev. 267–71 (1983); WCB Letter 12/10/10, Attach. at 1–23, Steven C. Salop & Thomas Krattenmaker, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price,* 96 Yale L.J. 214 (1986). *See also* Andrew I. Gavil *et al., Antitrust Law in Perspective: Cases, Concepts and Problems in Competition Policy* 1153–92 (2d ed. 2008) (describing how policies fostering competition spur innovation). To similar effect, a broadband provider may raise access fees to disfavored edge providers, reducing their ability to profit by raising their costs and limiting their ability to compete with favored edge providers.

[16] *See* Google Comments at 30–31; Netflix Comments at 7 n.10; Vonage Reply at 4; WCB Letter 12/10/10, Attach. at 28–78, Austan Goolsbee, *Vertical Integration and the Market for Broadcast and Cable Television Programming,* Paper for the Federal Communications Commission 31–32 (Sept. 5, 2007) (Goolsbee Study) (finding that MVPDs excluded networks that were rivals of affiliated channels for anticompetitive reasons). *Cf.* WCB Letter 12/10/10, Attach. at 85–87, David Waterman & Andrew Weiss, Vertical Integration in Cable Television 142–143 (1997) (MVPD exclusion of unaffiliated content during an earlier time period); *see also* H.R. Rep. 102–628 (2d Sess.) at 41 (1992) (''The Committee received testimony that vertically integrated companies reduce diversity in programming by threatening the viability of rival cable programming services.''). In addition to the examples of actual misconduct that we provide, the Goolsbee Study provides empirical evidence that cable providers have acted in the past on anticompetitive incentives to foreclose rivals, supporting our concern that these and other broadband providers would act on analogous incentives in the future. We thus disagree that we rely on ''speculative harms alone'' or have failed to adduce ''empirical evidence.'' Baker Statement at * 1, * 4 (citing AT&T Reply Exh. 2 at 45 (J. Gregory Sidak & David J. Teece, *Innovation Spillovers and the ''Dirt Road'' Fallacy: The Intellectual Bankruptcy of Banning Optional Transactions for Enhanced Delivery over the Internet,* 6 J. Competition L. & Econ. 521, 571–72 (2010)). To the contrary, the empirical evidence and the misconduct that we describe below validate the economic theories that inform our decision in this Order. Moreover, as we explain below, by comparison to the benefits of the prophylactic measures we adopt, the costs associated with these open Internet rules are likely small.

[17] Some end users can be reached through more than one broadband connection, sometimes via the same device (*e.g.,* a smartphone that has Wi-Fi and cellular connectivity). Even so, the end user, not the edge provider, chooses which broadband provider the edge provider must rely on to reach the end user.

[18] Also known as a ''terminating monopolist.'' *See, e.g.,* CCIA Comments at 7; Skype Comments at 10–11; Vonage Comments at 9–10; Google Reply at 8–14. A broadband provider can act as a gatekeeper even if some edge providers would have bargaining power in negotiations with broadband providers over access or prioritization fees.

[19] A broadband provider may hesitate to impose costs on its own subscribers, but it will typically not take into account the effect that reduced edge provider investment and innovation has on the attractiveness of the Internet to end users that rely on other broadband providers—and will therefore ignore a significant fraction of the cost of foregone innovation. *See, e.g.,* OIC Comments at 20–24. If the total number of broadband subscribers shrinks, moreover, the social costs unaccounted for by the broadband provider could also include the lost ability of the remaining end users to connect with the subscribers that departed (foregone direct network effects) and a smaller potential audience for edge providers. *See, e.g., id.* at 23. Broadband providers are also unlikely to fully account for the open Internet's power to enhance civic discourse through news and information, or for its ability to enable innovations that help address key national challenges such as education, public safety, energy efficiency, and health care. *See* ARL *et al.* Comments at 3; Google Reply at 39; American Recovery and Reinvestment Act of 2009, Public Law 111–5, 123 Stat. 115 (2009).

that an edge provider would expect to earn from developing new offerings, and thereby reduce edge providers' incentives to invest and innovate.[20] In the rapidly innovating edge sector, moreover, many new entrants are new or small ''garage entrepreneurs,'' not large and established firms. These emerging providers are particularly sensitive to barriers to innovation and entry, and may have difficulty obtaining financing if their offerings are subject to being blocked or disadvantaged by one or more of the major broadband providers. In addition, if edge providers need to negotiate access or prioritized access fees with broadband providers,[21] the resulting transaction costs could further raise the costs of introducing new products and might chill entry and expansion.[22]

Some commenters argue that an end user's ability to switch broadband providers eliminates these problems. But many end users may have limited choice among broadband providers, as discussed below. Moreover, those that can switch broadband providers may not benefit from switching if rival broadband providers charge edge providers similarly for access and priority transmission and prioritize each edge provider's service similarly. Further, end users may not know whether charges or service levels their broadband provider is imposing on edge providers vary from those of alternative broadband providers, and even if they do have this information may find it costly to switch. For these reasons, a dissatisfied end user, observing that some edge provider services are subject to low transmission quality, might not switch broadband providers (though they may switch to a rival edge provider in the hope of improving quality).

Some commenters contend that, in the absence of open Internet rules, broadband providers that earn substantial additional revenue by assessing access or prioritization charges on edge providers could avoid increasing or could reduce the rates they charge broadband subscribers, which might increase the number of subscribers to the broadband network. Although this scenario is possible,[23] no broadband provider has stated in this proceeding that it actually would use any revenue from edge provider charges to offset subscriber charges. In addition, these commenters fail to account for the likely detrimental effects of access and prioritization charges on the virtuous circle of innovation described above. Less content and fewer innovative offerings make the Internet less attractive for end users than would otherwise be the case. Consequently, we are unable to conclude that the possibility of reduced subscriber charges outweighs the risks of harm described herein.[24]

*Third,* if broadband providers can profitably charge edge providers for prioritized access to end users, they will have an incentive to degrade or decline to increase the quality of the service they provide to non-prioritized traffic. This would increase the gap in quality (such as latency in transmission) between prioritized access and non-prioritized access, induce more edge providers to pay for prioritized access, and allow broadband providers to charge higher prices for prioritized access. Even more damaging, broadband providers might withhold or decline to expand capacity in order to ''squeeze'' non-prioritized traffic, a strategy that would increase the likelihood of network congestion and confront edge providers with a choice between accepting low-quality transmission or paying fees for prioritized access to end users.

Moreover, if broadband providers could block specific content, applications, services, or devices, end users and edge providers would lose the control they currently have over whether other end users and edge providers can communicate with them through the Internet. Content, application, service, and device providers (and their investors) could no longer assume that the market for their offerings included all U.S. end users. And broadband providers might choose to implement undocumented practices for traffic differentiation that undermine the ability of developers to create generally usable applications without having to design to particular broadband providers' unique practices or business arrangements.[25]

All of the above concerns are exacerbated by broadband providers' ability to make fine-grained distinctions in their handling of network traffic as a result of increasingly sophisticated network management tools. Such tools may be used for beneficial purposes, but they also increase broadband providers' ability to act on incentives to engage in

[20] *See, e.g.,* ALA Comments at 3–4; ColorOfChange Comments at 3; Free Press Comments at 69; Google Comments at 34; Netflix Comments at 4; OIC Comments at 29–30; DISH Reply at 10. Such fees could also reduce an edge provider's incentive to invest in existing offerings, assuming the fees would be expected to increase to the extent improvements increased usage of the edge provider's offerings.

[21] Negotiations impose direct expenses and delay. *See* Google Comments at 34. There may also be significant costs associated with the possibility that the negotiating parties would reach an impasse. *See* ALA Comments at 2 (''The cable TV industry offers a telling example of the 'pay to play' environment where some cable companies do not offer their customers access to certain content because the company has not successfully negotiated financial compensation with the content provider.''). Edge providers may also bear costs arising from their need to monitor the extent to which they actually receive prioritized delivery.

[22] *See, e.g.,* Google Comments at 34–35; Shane Greenstein Notice of Ex Parte, GN Docket No. 09–191, *Transaction Cost, Transparency, and Innovation for the Internet* at 19, *available at http://www.openinternet.gov/workshops/innovation-investment-and-the-open-internet.html;* van Schewick Jan. 19, 2010 *Ex Parte* Letter, Opening Statement at 7 (arguing that the low costs of innovation not only make many more applications worth pursuing, but also allow a large and diverse group of people to become innovators, which in turn increases the overall amount and quality of innovation). There are approximately 1,500 broadband providers in the United States. *See* Wireline Competition Bureau, FCC, Internet Access Services: Status as of December 31, 2009 at 7, tbl. 13 (Dec. 2010) (FCC Internet Status Report), *available at http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1208/DOC-303405A1.pdf.* The innovative process frequently generates a large number of attempts, only a few of which turn out to be highly successful. Given the likelihood of failure, and that financing is not always readily available to support research and development, the innovation process in many sectors of the Internet's edge is likely to be highly sensitive to the upfront costs of developing and introducing new products. PIC Comments at 50 (''[I]t is unlikely that new entrants will have the ability (both financially and with regard to information) to negotiate with every ISP that serves the markets that they are interested in.'').

[23] Economics literature recognizes that access charges could be harmful under some circumstances and beneficial under others. *See, e.g.,* WCB Letter 12/10/10, Attach. at 1–62, E. Glen Weyl, *A Price Theory of Multi-Sided Platforms,* 100 Am. Econ. Rev. 1642, 1642–72 (2010) (the effects of allowing broadband providers to charge terminating rates to content providers are ambiguous); *see also* WCB Letter 12/10/10, Attach. at 180–215, John Musacchio *et al., A Two-Sided Market Analysis of Provider Investment Incentives with an Application to the Net-Neutrality Issue,* 8 Rev. of Network Econ. 22, 22–39 (2009) (noting that there are conditions under which ''a zero termination price is socially beneficial''). Moreover, the economic literature on two-sided markets is at an early stage of development. AT&T Comments, Exh. 3, Schwartz Decl. at 16; Jeffrey A. Eisenach (Eisenach) Reply at 11–12; *cf., e.g.,* WCB Letter 12/10/10, Attach. at 156–79, Mark Armstrong, *Competition in Two-Sided Markets,* 37 Rand J. of Econ. 668 (2006); WCB Letter 12/10/10, Attach. at 216–302, Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets,* 1 J. Eur. Econ. Ass'n 990 (2003).

[24] Indeed, demand for broadband Internet access service might decline even if subscriber fees fell, if the conduct of broadband providers discouraged demand by blocking end user access to preferred edge providers, slowing non-prioritized transmission, and breaking the virtuous circle of innovation.

[25] *See* OIC Comments at 24; Free Press Comments at 45. The transparency and reasonable network management guidelines we adopt in this Order, in particular, should reduce the likelihood of such fragmentation of the Internet.

network practices that would erode Internet openness.[26]

Although these threats to Internet-enabled innovation, growth, and competition do not depend upon broadband providers having market power with respect to end users,[27] most would be exacerbated by such market power. A broadband provider's incentive to favor affiliated content or the content of unaffiliated firms that pay for it to do so, its incentive to block or degrade traffic or charge edge providers for access to end users, and its incentive to squeeze non-prioritized transmission will all be greater if end users are less able to respond by switching to rival broadband providers. The risk of market power is highest in markets with few competitors, and most residential end users today have only one or two choices for wireline broadband Internet access service. As of December 2009, nearly 70 percent of households lived in census tracts where only one or two wireline or fixed wireless firms provided advertised download speeds of at least 3 Mbps and upload speeds of at least 768 Kbps [28]—the closest observable benchmark to the minimum download speed of 4 Mbps and upload speed of 1 Mbps that the Commission has used to assess broadband deployment. About 20 percent of households are in census tracts with only one provider advertising at least 3 Mbps down and 768 Kbps up. For Internet service with advertised download speeds of at least 10 Mbps down and upload speeds of at least 1.5 Mbps up, nearly 60 percent of households lived in census tracts served by only one wireline or fixed wireless broadband provider, while nearly 80 percent lived in census tracts served by no more than two wireline or fixed wireless broadband providers.

Including mobile broadband providers does not appreciably change these numbers.[29] The roll-out of next generation mobile services is at an early stage, and the future of competition in residential broadband is unclear.[30] The record does not enable us to make a predictive judgment that the future will be more competitive than the past. Although wireless providers are increasingly offering faster broadband services, we do not know, for example, how end users will value the trade-offs between the benefits of wireless service (*e.g.,* mobility) and the benefits of fixed wireline service (*e.g.,* higher download and upload speeds).[31] We note that the two largest mobile broadband providers also offer wireline or fixed service; [32] this could dampen their incentive to compete aggressively with wireline (or fixed) services.[33]

In addition, customers may incur significant costs in switching broadband providers [34] because of early termination fees; [35] the inconvenience of ordering, installation, and set-up, and associated deposits or fees; possible difficulty returning the earlier broadband provider's equipment and the cost of replacing incompatible customer-owned equipment; the risk of temporarily losing service; the risk of problems learning how to use the new service; and the possible loss of a provider-specific e-mail address or Web site.

### *C. Broadband Providers Have Acted To Limit Openness*

These dangers to Internet openness are not speculative or merely theoretical. Conduct of this type has already come before the Commission in enforcement proceedings. As early as 2005, a broadband provider that was a subsidiary of a telephone company paid $15,000 to settle a Commission investigation into whether it had blocked Internet ports used for competitive VoIP applications. In 2008, the Commission found that Comcast disrupted certain peer-to-peer (P2P) uploads of its subscribers, without a reasonable network management justification and without disclosing its actions. Comparable practices have been observed in the provision of mobile broadband services. After entering into a contract with a company to handle online payment services, a mobile wireless provider allegedly blocked customers' attempts to use competing services to make purchases using their mobile phones. A nationwide mobile provider restricted the types of lawful applications that could be accessed over its 3G mobile wireless network.

[26] *See* CCIA/CEA Comments at 4; Free Press Comments at 29–30, 143–46; Google Comments at 32–34; Netflix Comments at 3; OIC Comments at 14, 79–82; DISH Reply at 8–9; IPI Reply at 9; Vonage Reply at 5. For examples of network management tools, see, for example, WCB Letter 12/10/10, Attach. at 1–8, Allot Service Gateway, Pushing the DPI Envelope: An Introduction, at 2 (June 2007), *available at http://www.sysob.com/download/AllotServiceGateway.pdf* (''Reduce the performance of applications with negative influence on revenues (*e.g.* competitive VoIP services).''); WCB Letter 12/13/10, Attach. at 289–90, Procera Networks, PLR, *http://www.proceranetworks.com/customproperties/tag/Products-PLR.html;* WCB Letter 12/13/10, Attach. at 283–88, Cisco, *http//:www.cisco.com/en/US/prod/collateral/ps7045/ps6129/ps6133/ps6150/prod_brochure0900aecd8025258e.pdf* (marketing the ability of equipment to identify VoIP, video, and other traffic types). Vendors market their offerings as enabling broadband providers to ''make only modest incremental infrastructure investments and to control operating costs.'' WCB Letter 12/13/10, Attach. at 283, Cisco.

[27] Because broadband providers have the ability to act as gatekeepers even in the absence of market power with respect to end users, we need not conduct a market power analysis.

[28] *See* FCC Internet Status Report at 7, fig. 3(a). A broadband provider's presence in a census tract does not mean it offers service to all potential customers within that tract. And the data reflect subscriptions, not network capability.

[29] In December 2009, nearly 60% of households lived in census tracts where no more than two broadband providers offered service with 3 Mbps down and 768 Kbps up, while no mobile broadband providers offered service with 10 Mbps down and 1.5 Mbps up. *Id.* at 8, fig. 3(b). Mobile broadband providers generally have offered bandwidths lower than those available from fixed providers. *See* Yottabyte at 13–14.

[30] *See* National Broadband Plan at 40–42. A number of commenters discuss impediments to increased competition. *See, e.g.,* Ad Hoc Comments at 9; Google Comments, at 18–22; IFTA Comments at 10–11; *see also* WCB Letter 12/10/10, Attach. at 9–16, Thomas Monath *et al., Economics of Fixed Broadband Network Strategies,* 41 IEEE Comm. Mag. 132, 132–39 (Sept. 2003).

[31] *See* Ad Hoc Comments at 9; Google Comments at 21; Vonage Comments at 8; IPI Reply at 14; WCB Letter 12/10/10, Attach. at 56–65, Vikram Chandrasekhar & Jeffrey G. Andrews, *Femtocell Networks: A Survey,* 46 IEEE Comm. Mag., Sept. 2008, 59, at 59–60 (explaining mobile spectrum alone cannot compete with wireless connections to fixed networks). We also do not know how offers by a single wireless broadband provider for both fixed and mobile broadband services will perform in the marketplace.

[32] *See* OIC Comments at 71–72. Large cable companies that provide fixed broadband also have substantial ownership interests in Clear, the 4G wireless venture in which Sprint has a majority ownership interest.

[33] OIC Comments at 71–72; Skype Comments at 10. In cellular telephony, multimarket conduct has been found to dampen competition. *See* WCB Letter 12/10/10, Attach. at 1–24, P.M. Parker and L.H. Röller, *Collusive conduct in duopolies: Multimarket contact and cross ownership in the mobile telephone industry,* 28 Rand J. Of Econ. 304, 304–322 (Summer 1997); WCB Letter 12/10/10, Attach. at 25–58, Meghan R. Busse, *Multimarket contact and price coordination in the cellular telephone industry,* 9 J. of Econ. & Mgmt. Strategy 287, 287–320 (Fall 2000). Moreover, some fixed broadband providers also provide necessary inputs to some mobile providers' offerings, such as backhaul transport to wireline facilities.

[34] ARL *et al.* Comments at 5; Google Comments at 21–22; Netflix Comments at 5; New Jersey Rate Counsel (NJRC) Comments at 17; OIC Comments at 40, 73; PIC Comments at 23; Skype Comments at 12; OIC Reply at 20–21; Paul Misener (Amazon.com) Comments at 2; *see also* WCB Letter 12/10/10, Attach. at 59–76, Patrick Xavier & Dimitri Ypsilanti, *Switching Costs and Consumer Behavior: Implications for Telecommunications Regulation,* 10(4) Info 2008, 13, 13–29 (2008). Churn is a function of many factors. *See, e.g.,* WCB Letter 12/10/10, Attach. at 1–53, 97–153, AT&T Comments, WT Docket No. 10–133, at 51 (Aug. 2, 2010). The evidence in the record, *e.g.,* AT&T Comments at 83, is not probative as to the extent of competition among broadband providers because it does not appropriately isolate a connection between churn levels and the extent of competition.

[35] Google Comments at 21–22. Of broadband end users with a choice of broadband providers, 32% said paying termination fees to their current provider was a major reason why they have not switched service. FCC, Broadband Decision: What Drives Consumers to Switch—Or Stick With—Their Broadband Internet Provider 8 (Dec. 2010) (FCC Internet Survey), *available at hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-303264A1.pdf.*

There have been additional allegations of blocking, slowing, or degrading P2P traffic. We do not determine in this Order whether any of these practices violated open Internet principles, but we note that they have raised concerns among edge providers and end users, particularly regarding lack of transparency. For example, in May 2008 a major cable broadband provider acknowledged that it had managed the traffic of P2P services. In July 2009, another cable broadband provider entered into a class action settlement agreement stating that it had ''ceased P2P Network Management Practices,'' but allowing the provider to resume throttling P2P traffic.[36] There is evidence that other broadband providers have engaged in similar degradation.[37] In addition, broadband providers' terms of service commonly reserve to the provider sweeping rights to block, degrade, or favor traffic. For example, one major cable provider reserves the right to engage, ''without limitation,'' in ''port blocking, * * * traffic prioritization and protocol filtering.'' Further, a major mobile broadband provider prohibits use of its wireless service for ''downloading movies using peer-to-peer file sharing services'' and VoIP applications. And a cable modem manufacturer recently filed a formal complaint with the Commission alleging that a major broadband Internet access service provider has violated open Internet principles through overly restrictive device approval procedures.

These practices have occurred notwithstanding the Commission's adoption of open Internet principles in the *Internet Policy Statement;* enforcement proceedings against Madison River Communications and Comcast for their interference with VoIP and P2P traffic, respectively; Commission orders that required certain broadband providers to adhere to open Internet obligations; longstanding norms of Internet openness; and statements by major broadband providers that they support and are abiding by open Internet principles.

### *D. The Benefits of Protecting the Internet's Openness Exceed the Costs*

Widespread interference with the Internet's openness would likely slow or even break the virtuous cycle of innovation that the Internet enables, and would likely cause harms that may be irreversible or very costly to undo. For example, edge providers could make investments in reliance upon exclusive preferential arrangements with broadband providers, and network management technologies may not be easy to change.[38] If the next revolutionary technology or business is not developed because broadband provider practices chill entry and innovation by edge providers, the missed opportunity may be significant, and lost innovation, investment, and competition may be impossible to restore after the fact. Moreover, because of the Internet's role as a general purpose technology, erosion of Internet openness threatens to harm innovation, investment in the core and at the edge of the network, and competition in many sectors, with a disproportionate effect on small, entering, and non-commercial edge providers that drive much of the innovation on the Internet.[39] Although harmful practices are not certain to become widespread, there are powerful reasons for immediate concern, as broadband providers have interfered with the open Internet in the past and have incentives and an increasing ability to do so in the future. Effective open Internet rules can prevent or reduce the risk of these harms, while helping to assure Americans unfettered access to diverse sources of news, information, and entertainment, as well as an array of technologies and devices that enhance health, education, and the environment.

By comparison to the benefits of these prophylactic measures, the costs associated with the open Internet rules adopted here are likely small. Broadband providers generally endorse openness norms—including the transparency and no blocking principles—as beneficial and in line with current and planned business practices (though they do not uniformly support rules making them enforceable).[40] Even to the extent rules require some additional disclosure of broadband providers' practices, the costs of compliance should be modest. In addition, the high-level rules we adopt carefully balance preserving the open Internet against avoiding unduly burdensome regulation. Our rules against blocking and unreasonable discrimination are subject to reasonable network management, and our rules do not prevent broadband providers from offering specialized services such as facilities-based VoIP. In short, rules that reinforce the openness that has supported the growth of the Internet, and do not substantially change this highly successful status quo, should not entail significant compliance costs.

Some commenters contend that open Internet rules are likely to reduce investment in broadband deployment. We disagree. There is no evidence that prior open Internet obligations have discouraged investment;[41] and

[36] *See* RCN Settlement Agreement sec. 3.2. RCN denied any wrongdoing, but it acknowledges that in order to ease network congestion, it targeted specific P2P applications. *See* Letter from Jean L. Kiddo, RCN, to Marlene Dortch, Secretary, FCC, GN Docket No. 09–191, WC Docket No. 07–52, at 2–5 (filed May 7, 2010).

[37] A 2008 study by the Max Planck Institute revealed significant blocking of BitTorrent applications in the United States. Comcast and Cox were both cited as examples of providers blocking traffic. *See generally* WCB Letter 12/10/10, Attach. at 75–80, Marcel Dischinger *et al.*, Max Planck Institute, Detecting BitTorrent Blocking (2008), *available at broadband.mpi-sws.org/transparency/results/08_imc_blocking.pdf; see also* WCB Letter 12/13/10, Attach. at 235–39, Max Planck Institute for Software Systems, Glasnost: Results from Tests for BitTorrent Traffic Blocking, broadband.mpi-sws.org/transparency/results; WCB Letter 12/13/10, Attach. at 298–315, Christian Kreibich *et al.*, Netalyzr: Illuminating Edge Network Neutrality, Security, and Performance 15 (2010), *available at http://www.icsi.berkeley.edu/pubs/techreports/TR-10-006.pdf.*

[38] As one example, Comcast's transition to a protocol-agnostic network management practice took almost nine months to complete. *See* Letter from Kathryn A. Zachem, V.P., Regulatory Affairs, Comcast Corp., to Marlene Dortch, Secretary, FCC, WC Docket No. 07–52 at 2 (filed July 10, 2008); Letter from Kathryn A. Zachem, V.P., Regulatory Affairs, Comcast Corp., to Marlene Dortch, Secretary, FCC, WC Docket No. 07–52 at Attach. B at 3, 9 (filed Sept. 19, 2008) (noting that the transition required ''lab tests, technical trials, customer feedback, vendor evaluations, and a third-party consulting analysis,'' as well as trials in five markets).

[39] *See, e.g.,* ALA Comments at 2; IFTA Comments at 14. Even some who generally oppose open Internet rules agree that extracting access fees from entities that produce content or services without the anticipation of financial reward would have significant adverse effects. *See* WCB Letter 12/10/10, Attach. at 35–80, C. Scott Hemphill, *Network Neutrality and the False Promise of Zero-Price Regulation,* 25 Yale J. on Reg. 135, 161–62 (2008) (''[S]ocial production has distinctive features that make it unusually valuable, but also unusually vulnerable, to a particular form of exclusion. That mechanism of exclusion is not subject to the prohibitions of antitrust law, moreover, presenting a relatively stronger argument for regulation.''), *cited in* Prof. Tim Wu Comments at 9 n.22.

[40] We note that many broadband providers are, or soon will be, subject to open Internet requirements in connection with grants under the Broadband Technology Opportunities Program (BTOP). The American Recovery and Reinvestment Act of 2009 required that nondiscrimination and network interconnection obligations be ''contractual conditions'' of all BTOP grants. Public Law 111–5, sec. 6001(j), 123 Stat. 115 (codified at 47 U.S.C. sec. 1305). These nondiscrimination and interconnection conditions require BTOP grantees, among other things, to adhere to the principles in the *Internet Policy Statement;* to display any network management policies in a prominent location on the service provider's Web site; and to offer interconnection where technically feasible.

[41] *See, e.g.,* Free Press Comments at 4, 23–25; Google Comments at 38–39; XO Comments at 12. In making prior investment decisions, broadband providers could not have reasonably assumed that the Commission would abstain from regulating in this area, as the Commission's decisions classifying cable modem service and wireline broadband Internet access service as information services included notices of proposed rulemaking seeking comment on whether the Commission should adopt

Continued

numerous commenters explain that, by preserving the virtuous circle of innovation, open Internet rules will increase incentives to invest in broadband infrastructure. Moreover, if permitted to deny access, or charge edge providers for prioritized access to end users, broadband providers may have incentives to allow congestion rather than invest in expanding network capacity. And as described in Part III, below, our rules allow broadband providers sufficient flexibility to address legitimate congestion concerns and other network management considerations. Nor is there any persuasive reason to believe that in the absence of open Internet rules broadband providers would lower charges to broadband end users, or otherwise change their practices in ways that benefit innovation, investment, competition, or end users.

The magnitude and character of the risks we identify make it appropriate to adopt prophylactic rules now to preserve the openness of the Internet, rather than waiting for substantial, pervasive, and potentially irreversible harms to occur before taking any action. The Supreme Court has recognized that even if the Commission cannot ''predict with certainty'' the future course of a regulated market, it may ''plan in advance of foreseeable events, instead of waiting to react to them.'' Moreover, as the Commission found in another context, ''[e]xclusive reliance on a series of individual complaints,'' without underlying rules, ''would prevent the Commission from obtaining a clear picture of the evolving structure of the entire market, and addressing competitive concerns as they arise. * * * Therefore, if the Commission exclusively relied on individual complaints, it would only become aware of specific * * * problems if and when the individual complainant's interests coincided with those of the interest of the overall 'public.' ''

Finally, we note that there is currently significant uncertainty regarding the future enforcement of open Internet principles and what constitutes appropriate network management, particularly in the wake of the court of appeals' vacatur of the *Comcast Network Management Practices Order.* A number of commenters, including leading broadband providers, recognize the benefits of greater predictability regarding open Internet protections.[42] Broadband providers benefit from increased certainty that they can reasonably manage their networks and innovate with respect to network technologies and business models. For those who communicate and innovate on the Internet, and for investors in edge technologies, there is great value in having confidence that the Internet will remain open, and that there will be a forum available to bring complaints about violations of open Internet standards.[43] End users also stand to benefit from assurances that services on which they depend ''won't suddenly be pulled out from under them, held ransom to extra payments either from the sites or from them.'' Providing clear yet flexible rules of the road that enable the Internet to continue to flourish is the central goal of the action we take in this Order.[44]

## III. Open Internet Rules

To preserve the Internet's openness and broadband providers' ability to manage and expand their networks, we adopt high-level rules embodying four core principles: transparency, no blocking, no unreasonable discrimination, and reasonable network management. These rules are generally consistent with, and should not require

rules to protect consumers. *See Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities et al.,* Report and Order and NPRM, 20 FCC Rcd 14853, 14929–35, paras. 146–59 (2005); *Inquiry Concerning High-Speed Access to the Internet Over Cable & Other Facilities et al.,* Declaratory Ruling and NPRM, 17 FCC_ Rcd 4798, 4839–48, paras. 72–95 (2002) (seeking comment on whether the Commission should require cable operators to give unaffiliated ISPs access to broadband cable networks); *see also* AT&T Comments at 8 (''[T]he existing principles already address any blocking or degradation of traffic and thus eliminate any theoretical leverage providers may have to impose [unilateral 'tolls'].'').

[42] For example, AT&T has recognized that open Internet rules ''would reduce regulatory uncertainty, and should encourage investment and innovation in next generation broadband services and technologies.'' *See* WCB Letter 12/10/10, Attach. at 94, AT&T *Statement on Proposed FCC Rules to Preserve an Open Internet,* AT&T Public Policy Blog, Dec. 1, 2010, attpublicpolicy.com/government-policy/att-statement-on-proposed-fcc-rules-to-preserve-an-open-internet. Similarly, Comcast acknowledged that our proposed rules would strike ''a workable balance between the needs of the marketplace and the certainty that carefully-crafted and limited rules can provide to ensure that Internet freedom and openness are preserved.'' *See* David L. Cohen, *FCC Proposes Rules to Preserve an Open Internet,* comcastvoices, Dec. 1, 2010, *blog.comcast.com/2010/12/fcc-proposes-rules-to-preserve-an-open-internet.html; see also, e.g.,* Final Brief for Intervenors NCTA and NBC Universal, Inc. at 11–13; 19–22, *Comcast Corp.* v. *FCC,* 600 F.3d 642 (DC Cir. 2010) (No. 08–1291). In addition to broadband providers, an array of industry leaders, venture capitalists, and public interest groups have concluded that our rules will promote investment in the Internet ecosystem by removing regulatory uncertainty. *See* Free Press Comments at 10; Google Comments at 40; PIC Comments at 28; WCB Letter 12/10/10, Attach. at 91 (statement of CALinnovates.org), 96 (statement of Larry Cohen, president of the Communications Workers of America), 98 (statement of Ron Conway, founder of SV Angel), 99 (statement of Craig Newmark, founder of craigslist), 105 (statement of Dean Garfield, president and CEO of the Information Technology Industry Council), 111 (Dec. 8, 2010 letter from Jeremy Liew, Managing Director, Lightspeed Venture Partners to Julius Genachowski, FCC Chairman), 112 (Dec. 1, 2010 letter from Jed Katz, Managing Director, Javelin Venture Partners to Julius Genachowski, FCC Chairman), 127 (statement of Gary Shapiro, president and CEO of the Consumer Electronics Association), 128 (statement of Ram Shriram, founder of Sherpalo Ventures), 132 (statements of Rey Ramsey, President and CEO of TechNet, and John Chambers, Chairman and CEO of Cisco), 133 (statement of John Doerr, Kleiner Perkins Caufield & Byers); XO Reply at 6.

[43] For this reason, we are not persuaded that alternative approaches, such as rules that lack a formal enforcement mechanism, a transparency rule alone, or reliance entirely on technical advisory groups to resolve disputes, would adequately address the potential harms and be less burdensome than the rules we adopt here. *See, e.g.,* Verizon Comments at 130–34. In particular, we reject the notion that Commission action is unnecessary because the Department of Justice and the Federal Trade Commission (FTC) ''are well equipped to cure any market ills.'' *Id.* at 9. Our statutory responsibilities are broader than preventing antitrust violations or unfair competition. *See, e.g., News Corp. and DIRECTV Group, Inc.,* 23 FCC Rcd 3265, 3277–78, paras. 23–25 (2008). We must, for example, promote deployment of advanced telecommunications capability, ensure that charges in connection with telecommunications services are just and reasonable, ensure the orderly development of local television broadcasting, and promote the public interest through spectrum licensing. *See* CDT Comments at 8–9; Comm'r Jon Liebowitz, FTC, *Concurring Statement of Commissioner Jon Leibowitz Regarding the Staff Report: ''Broadband Connectivity Competition Policy''* (2007), *available at http://www.ftc.gov/speeches/leibowitz/V070000statement.pdf* (''[T]here is little agreement over whether antitrust, with its requirements for *ex post* case by case analysis, is capable of fully and in a timely fashion *resolving* many of the concerns that have animated the net neutrality debate.'').

[44] Contrary to the suggestion of some, neither the Department of Justice nor the FTC has concluded that the broadband market is competitive or that open Internet rules are unnecessary. *See* McDowell Statement at *4; Baker Statement at *3. In the submission in question, the Department observed that: (1) The wireline broadband market is highly concentrated, with most consumers served by at most two providers; (2) the prospects for additional wireline competition are dim due to the high fixed and sunk costs required to provide wireline broadband service; and (3) the extent to which mobile wireless offerings will compete with wireline offerings is unknown. *See* DOJ *Ex Parte* Jan. 4, 2010, GN Dkt. No. 09–51, at 8, 10, 13–14. The Department specifically endorsed requiring greater transparency by broadband providers, *id.* at 25–27, and recognized that in concentrated markets, like the broadband market, it is appropriate for policymakers to limit ''business practices that thwart innovation.'' *Id.* at 11. Finally, although the Department cautioned that care must be taken to avoid stifling infrastructure investment, it expressed particular concern about price regulation, which we are not adopting. *Id.* at 28. In 2007, the FTC issued a staff report on broadband competition policy. *See* FTC, *Broadband Connectivity Competition Policy* (June 2007). Like the Department, the FTC staff did not conclude that the broadband market is competitive. To the contrary, the FTC staff made clear that it had not studied the state of competition in any specific markets. *Id.* at 8, 105, 156. With regard to the merits of open Internet rules, the FTC staff report recited arguments pro and con, *see, e.g., id.* at 82, 105, 147–54, and called for additional study, *id.* at 7, 9–10, 157.

significant changes to, broadband providers' current practices, and are also consistent with the common understanding of broadband Internet access service as a service that enables one to go where one wants on the Internet and communicate with anyone else online.[45]

*A. Scope of the Rules*

We find that open Internet rules should apply to ''broadband Internet access service,'' which we define as:

*A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part.*

The term ''broadband Internet access service'' includes services provided over any technology platform, including but not limited to wire, terrestrial wireless (including fixed and mobile wireless services using licensed or unlicensed spectrum), and satellite.[46]

''Mass market'' means a service marketed and sold on a standardized basis to residential customers, small businesses, and other end-user customers such as schools and libraries. For purposes of this definition, ''mass market'' also includes broadband Internet access services purchased with the support of the E-rate program that may be customized or individually negotiated. The term does not include enterprise service offerings, which are typically offered to larger organizations through customized or individually negotiated arrangements.

''Broadband Internet access service'' encompasses services that ''provide the capability to transmit data to and receive data from all or substantially all Internet endpoints.'' To ensure the efficacy of our rules in this dynamic market, we also treat as a ''broadband Internet access service'' any service the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in these rules.

A key factor in determining whether a service is used to evade the scope of the rules is whether the service is used as a substitute for broadband Internet access service. For example, an Internet access service that provides access to a substantial subset of Internet endpoints based on end users preference to avoid certain content, applications, or services; Internet access services that allow some uses of the Internet (such as access to the World Wide Web) but not others (such as e-mail); or a ''Best of the Web'' Internet access service that provides access to 100 top Web sites could not be used to evade the open Internet rules applicable to ''broadband Internet access service.'' Moreover, a broadband provider may not evade these rules simply by blocking end users' access to some Internet endpoints. Broadband Internet access service likely does not include services offering connectivity to one or a small number of Internet endpoints for a particular device, *e.g.,* connectivity bundled with e-readers, heart monitors, or energy consumption sensors, to the extent the service relates to the functionality of the device.[47] Nor does broadband Internet access service include virtual private network services, content delivery network services, multichannel video programming services, hosting or data storage services, or Internet backbone services (if those services are separate from broadband Internet access service). These services typically are not mass market services and/or do not provide the capability to transmit data to and receive data from all or substantially all Internet endpoints.[48]

Although one purpose of our open Internet rules is to prevent blocking or unreasonable discrimination in transmitting online traffic for applications and services that compete with traditional voice and video services, we determine that open Internet rules applicable to fixed broadband providers should protect all types of Internet traffic, not just voice or video Internet traffic. This reflects, among other things, our view that it is generally preferable to neither require nor encourage broadband providers to examine Internet traffic in order to discern which traffic is subject to the rules. Even if we were to limit our rules to voice or video traffic, moreover, it is unlikely that broadband providers could reliably identify such traffic in all circumstances, particularly if the voice or video traffic originated from new services using uncommon protocols.[49] Indeed, limiting our rules to voice and video traffic alone could spark a costly and wasteful cat-and-mouse game in which edge providers and end users seeking to obtain the protection of our rules could disguise their traffic as protected communications.[50]

We recognize that there is one Internet (although it is comprised of a multitude of different networks), and that it should remain open and

[45] The definition of ''broadband Internet access service'' proposed in the *Open Internet NPRM* encompassed any ''Internet Protocol data transmission between an end user and the Internet.'' *Open Internet NPRM,* 24 FCC Rcd at 13128, App. A. Some commenters argued that this definition would cover a variety of services that do not constitute broadband Internet access service as end users and broadband providers generally understand that term, but that merely offer data transmission between a discrete set of Internet endpoints (for example, virtual private networks, or videoconferencing services). *See, e.g.,* AT&T Comments at 96–100; Communications Workers of America (CWA) Comments at 10–12; Sprint Reply at 16–17; *see also* CDT Comments at 49–50 (distinguishing managed (or specialized) services from broadband Internet access service by defining the former, in part, as data transmission ''between an end user and a *limited* group of parties or endpoints'') (emphasis added).

[46] In the *Open Internet NPRM,* we proposed separate definitions of the terms ''broadband Internet access,'' and ''broadband Internet access service.'' *Open Internet NPRM,* 24 FCC Rcd at 13128, App. A sec. 8.3. For purposes of these rules, we find it simpler to define just the service.

[47] To the extent these services are provided by broadband providers over last-mile capacity shared with broadband Internet access service, they would be specialized services.

[48] We also note that our rules apply only as far as the limits of a broadband provider's control over the transmission of data to or from its broadband customers.

[49] This is true notwithstanding the increasing sophistication of network management tools, described above in Part II.B. *See* Arthur Callado *et al., A Survey on Internet Traffic Identification,* 11 IEEE Commnc'ns Surveys & Tutorials 37, 49 (2009).

[50] *See* IETF, Reflections on Internet Transparency, RFC 4924 at 5 (Jul. 2007) (RFC 4924) (''In practice, filtering intended to block or restrict application usage is difficult to successfully implement without customer consent, since over time developers will tend to re-engineer filtered protocols so as to avoid the filters. Thus over time, filtering is likely to result in interoperability issues or unnecessary complexity. These costs come without the benefit of effective filtering. * * *''); IETF, Considerations on the Use of a Service Identifier in Packet Headers, RFC 3639 at 3 (Oct. 2003) (RFC 3639) (''Attempts by intermediate systems to impose service-based controls on communications against the perceived interests of the end parties to the communication are often circumvented. Services may be tunneled within other services, proxied by a collaborating external host (*e.g.,* an anonymous redirector), or simply run over an alternate port (*e.g.,* port 8080 vs port 80 for HTTP).''). *Cf.* RFC 3639 at 4 (''From this perspective of network and application utility, it is preferable that no action or activity be undertaken by any agency, carrier, service provider, or organization which would cause end-users and protocol designers to generally obscure service identification information from the IP packet header.''). Our rules are nationwide and do not vary by geographic area, notwithstanding potential variations across local markets for broadband Internet access service. Uniform national rules create a more predictable policy environment for broadband providers, many of which offer services in multiple geographic areas. *See, e.g.,* Level 3 Comments at 13; Charter Comments at iv. Edge providers will benefit from uniform treatment of their traffic in different localities and by different broadband providers. Broadband end users will also benefit from uniform rules, which protect them regardless of where they are located or which broadband provider they obtain service from.

interconnected regardless of the technologies and services end users rely on to access it. However, for reasons discussed in Part III.E below related to mobile broadband—including the fact that it is at an earlier stage and more rapidly evolving—we apply open Internet rules somewhat differently to mobile broadband than to fixed broadband at this time. We define ''fixed broadband Internet access service'' as a broadband Internet access service that serves end users primarily at fixed endpoints using stationary equipment, such as the modem that connects an end user's home router, computer, or other Internet access device to the network. This term encompasses fixed wireless broadband services (including services using unlicensed spectrum) and fixed satellite broadband services. We define ''mobile broadband Internet access service'' as a broadband Internet access service that serves end users primarily using mobile stations. Mobile broadband Internet access includes services that use smartphones as the primary endpoints for connection to the Internet.[51] The discussion in this Part applies to both fixed and mobile broadband, unless specifically noted. Part III.E further discusses application of open Internet rules to mobile broadband.

For a number of reasons, these rules apply only to the provision of broadband Internet access service and not to edge provider activities, such as the provision of content or applications over the Internet. First, the Communications Act particularly directs us to prevent harms related to the utilization of networks and spectrum to provide communication by wire and radio. Second, these rules are an outgrowth of the Commission's *Internet Policy Statement.*[52] The *Statement* was issued in 2005 when the Commission removed key regulatory protections from DSL service, and was intended to protect against the harms to the open Internet that might result from broadband providers' subsequent conduct. The Commission has always understood those principles to apply to broadband Internet access service only, as have most private-sector stakeholders.[53] Thus, insofar as these rules translate existing Commission principles into codified rules, it is appropriate to limit the application of the rules to broadband Internet access service. Third, broadband providers control access to the Internet for their subscribers and for anyone wishing to reach those subscribers.[54] They are therefore capable of blocking, degrading, or favoring any Internet traffic that flows to or from a particular subscriber.

We also do not apply these rules to dial-up Internet access service because telephone service has historically provided the easy ability to switch among competing dial-up Internet access services. Moreover, the underlying dial-up Internet access service is subject to protections under Title II of the Communications Act. The Commission's interpretation of those protections has resulted in a market for dial-up Internet access that does not present the same concerns as the market for broadband Internet access. No commenters suggested extending open Internet rules to dial-up Internet access service.

Finally, we decline to apply our rules directly to coffee shops, bookstores, airlines, and other entities when they acquire Internet service from a broadband provider to enable their patrons to access the Internet from their establishments (we refer to these entities as ''premise operators'').[55] These services are typically offered by the premise operator as an ancillary benefit to patrons. However, to protect end users, we include within our rules broadband Internet access services provided to premise operators for purposes of making service available to their patrons.[56] Although broadband providers that offer such services are subject to open Internet rules, we note that addressing traffic unwanted by a premise operator is a legitimate network management purpose.[57]

### *B. Transparency*

Promoting competition throughout the Internet ecosystem is a central purpose of these rules. Effective disclosure of broadband providers' network management practices and the performance and commercial terms of their services promotes competition—as well as innovation, investment, end-user choice, and broadband adoption—in at least five ways. First, disclosure ensures that end users can make informed choices regarding the purchase and use of broadband service, which promotes a more competitive market for broadband services and can thereby reduce broadband providers' incentives and ability to violate open Internet principles.[58] Second, and relatedly, as end users' confidence in broadband providers' practices increases, so too should end users' adoption of broadband services—leading in turn to additional investment in Internet infrastructure as contemplated by Section 706 of the 1996 Act and other provisions of the communications laws.[59] Third,

[51] We note that Section 337(f)(1) of the Act excludes public safety services from the definition of mobile broadband Internet access service.

[52] When the Commission adopted the *Internet Policy Statement,* it promised to incorporate the principles into ''ongoing policymaking activities.'' *Internet Policy Statement,* 20 FCC Rcd at 14988, para. 5.

[53] *See, e.g., Appropriate Framework for Broadband Access to the Internet over Wireline Facilities,* Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853, 14976 (2005) (*Wireline Broadband Order*) (separate statement of Chairman Martin); *id.* at 14980 (Statement of Commissioner Copps, concurring); *id.* at 14983 (Statement of Commissioner Adelstein, concurring); Verizon 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.''). The Commission has conditioned wireline broadband provider merger approvals on the merged entity's compliance with these obligations. *See, e.g., SBC Commc'ns Inc. and AT&T Corp. Applications for Approval of Transfer of Control,* Memorandum Opinion and Order, 20 FCC Rcd 18290, 18392, para. 211 (2005).

[54] We thus find broadband providers distinguishable from other participants in the Internet marketplace. *See, e.g.,* Verizon Comments at 36–39 (discussing a variety of other participants in the Internet ecosystem); Verizon Reply at 36–37 (same); NCTA Comments at 47–49 (same); NCTA Reply at 22 (same).

[55] *See Communications Assistance for Law Enforcement Act and Broadband Access and Services,* First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989, 15006–07, para. 36, n.99 (2005) (*CALEA Order*). Consistent with the Commission's approach in the *CALEA Order,* ''[w]e note * * * that the provider of underlying [broadband service] facilities to such an establishment would be subject to [the rules].'' *Id.* at 15007, para. 36.

[56] We note that the premise operator that purchases the Internet service remains the end user for purposes of our rules, however. Moreover, although not bound by our rules, we encourage premise operators to disclose relevant restrictions on broadband service they make available to their patrons.

[57] We also do not include within the rules free access to individuals' wireless networks, even if those networks are intentionally made available to others. *See* Electronic Frontier Foundation (EFF) Comments at 25–28. No commenter argued that open Internet rules should apply to individual operators of wireless networks in these circumstances.

[58] Broadband providers may have an incentive not to provide such information to end users, as doing so can lessen switching costs for end users. Third-party information sources such as Consumer Reports and the trade press do not routinely provide such information. *See* CDT Comments at 31; CWA Comments at 21; DISH Comments at 2; Google Comments at ii, 64–66; Level 3 Comments at 13; Sandoval Reply at 60. Economic literature in this area also confirms that policies requiring firms to disclose information generally benefit competition and consumers. *See, e.g.,* Mark Armstrong, *Interactions Between Competition and Consumer Policy,* 4 Competition Policy Int'l 97 113–16 (Spring 2008), *eprints.ucl.ac.uk/7634/1/7634.pdf.*

[59] *See* PIC Reply at 16–18; Free Press Comments at 43–45; Ad Hoc Comments at ii; CDT Comments at 5–7; ALA Comments at 3; National Hispanic Media Coalition (NHMC) Comments at 8; National Broadband Plan at 168, 174 (lack of trust in Internet is significant factor preventing non-adopters from subscribing to broadband services); 47 U.S.C. secs.

disclosure supports innovation, investment, and competition by ensuring that startups and other edge providers have the technical information necessary to create and maintain online content, applications, services, and devices, and to assess the risks and benefits of embarking on new projects. Fourth, disclosure increases the likelihood that broadband providers will abide by open Internet principles, and that the Internet community will identify problematic conduct and suggest fixes.[60] Transparency thereby increases the chances that harmful practices will not occur in the first place and that, if they do, they will be quickly remedied, whether privately or through Commission oversight. Fifth, disclosure will enable the Commission to collect information necessary to assess, report on, and enforce the other open Internet rules. For all of these reasons, most commenters agree that informing end users, edge providers, and the Commission about the network management practices, performance, and commercial terms of broadband Internet access service is a necessary and appropriate step to help preserve an open Internet.

The *Open Internet NPRM* sought comment on what end users and edge providers need to know about broadband service, how this information should be disclosed, when disclosure should occur, and where information should be available. The resulting record supports adoption of the following rule:

*A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings.*[61]

The rule does not require public disclosure of competitively sensitive information or information that would compromise network security or undermine the efficacy of reasonable network management practices.[62] For example, a broadband provider need not publicly disclose information regarding measures it employs to prevent spam practices at a level of detail that would enable a spammer to defeat those measures.

Despite broad agreement that broadband providers should disclose information sufficient to enable end users and edge providers to understand the capabilities of broadband services, commenters disagree about the appropriate level of detail required to achieve this goal. We believe that at this time the best approach is to allow flexibility in implementation of the transparency rule, while providing guidance regarding effective disclosure models. We expect that effective disclosures will likely include some or all of the following types of information, timely and prominently disclosed in plain language accessible to current and prospective end users and edge providers, the Commission, and third parties who wish to monitor network management practices for potential violations of open Internet principles: [63]

Network Practices

- *Congestion Management:* If applicable, descriptions of congestion management practices; types of traffic subject to practices; purposes served by practices; practices' effects on end users' experience; criteria used in practices, such as indicators of congestion that trigger a practice, and the typical frequency of congestion; usage limits and the consequences of exceeding them; and references to engineering standards, where appropriate.[64]
- *Application-Specific Behavior:* If applicable, whether and why the provider blocks or rate-controls specific protocols or protocol ports, modifies protocol fields in ways not prescribed by the protocol standard, or otherwise inhibits or favors certain applications or classes of applications.
- *Device Attachment Rules:* If applicable, any restrictions on the types of devices and any approval procedures for devices to connect to the network. (For further discussion of required disclosures regarding device and application approval procedures for mobile broadband providers, see *infra*.)
- *Security:* If applicable, practices used to ensure end-user security or security of the network, including types of triggering conditions that cause a mechanism to be invoked (but excluding information that could reasonably be used to circumvent network security).

Performance Characteristics

- *Service Description:* A general description of the service, including the service technology, expected and actual access speed and latency, and the suitability of the service for real-time applications.
- *Impact of Specialized Services:* If applicable, what specialized services, if any, are offered to end users, and whether and how any specialized services may affect the last-mile capacity available for, and the performance of, broadband Internet access service.

Commercial Terms

- *Pricing:* For example, monthly prices, usage-based fees, and fees for early termination or additional network services.
- *Privacy Policies:* For example, whether network management practices entail inspection of network traffic, and

151, 230, 254, 1302. A recent FCC survey found that among non-broadband end users, 46% believed that the Internet is dangerous for kids, and 57% believed that it was too easy for personal information to be stolen online. John B. Horrigan, FCC Survey: Broadband Adoption & Use in America 17 (Mar. 2010), *available at http://www.fcc.gov/DiversityFAC/032410/consumer-survey-horrigan.pdf.*

[60] On a number of occasions, broadband providers have blocked lawful traffic without informing end users or edge providers. In addition to the Madison River and Comcast-BitTorrent incidents described above, broadband providers appear to have covertly blocked thousands of BitTorrent uploads in the United States throughout early 2008. *See* Marcel Dischinger *et al.;* Catherine Sandoval, *Disclosure, Deception, and Deep-Packet Inspection,* 78 Fordham L. Rev. 641, 666–84 (2009).

[61] For purposes of these rules, ''consumer'' includes any subscriber to the broadband provider's broadband Internet access service, and ''person'' includes any ''individual, group of individuals, corporation, partnership, association, unit of government or legal entity, however organized,'' *cf.* 47 CFR 54.8(a)(6). We also expect broadband providers to disclose information about the impact of ''specialized services,'' if any, on last-mile capacity available for, and the performance of, broadband Internet access service.

[62] Commenters disagree on the risks of requiring disclosure of information regarding technical, proprietary, and security-related management practices. *Compare, e.g.,* American Cable Association (ACA) Comments at 17; AFTRA *et al.* Comments at ii, 16; Cox Comments at 11; Fiber-to-the-Home Council (FTTH) Comments at 3, 27; Libove Comments at 4; Sprint Comments at 16; T-Mobile Comments at 39, *with, e.g.,* Free Press Comments at 117–18; Free Press Reply at 17–19; Digital Education Coalition (DEC) Comments at 14; NJRC Comments at 20–21. We may subsequently require disclosure of such information to the Commission; to the extent we do, we will ensure that such information is protected consistent with existing Commission procedures for treatment of confidential information.

[63] In setting forth the following categories of information subject to the transparency principle, we assume that the broadband provider has chosen to offer its services on standardized terms, although providers of ''information services'' are not obligated to do so. If the provider tailors its terms of service to meet the requirements of an individual end user, those terms must at a minimum be disclosed to the end user in accordance with the transparency principle.

[64] We note that the description of congestion management practices provided by Comcast in the wake of the Comcast-BitTorrent incident likely satisfies the transparency rule with respect to congestion management practices. *See* Comcast, Network Management Update, *http://www.comcast.net/terms/network/update;* Comcast, Comcast Corporation Description of Planned Network Management Practices to be Deployed Following the Termination of Current Practices, *downloads.comcast.net/docs/Attachment_B_Future_Practices.pdf.*

whether traffic information is stored, provided to third parties, or used by the carrier for non-network management purposes.

• *Redress Options:* Practices for resolving end-user and edge provider complaints and questions.

We emphasize that this list is not necessarily exhaustive, nor is it a safe harbor—there may be additional information, not included above, that should be disclosed for a particular broadband service to comply with the rule in light of relevant circumstances. Broadband providers should examine their network management practices and current disclosures to determine what additional information, if any, should be disclosed to comply with the rule.

In the *Open Internet NPRM,* we proposed that broadband providers publicly disclose their practices on their Web sites and in promotional materials. Most commenters agree that a provider's Web site is a natural place for end users and edge providers to find disclosures, and several contend that a broadband provider's only obligation should be to post its practices on its Web site. Others assert that disclosures should also be displayed prominently at the point-of-sale, in bill inserts, and in the service contract. We agree that broadband providers must, at a minimum, prominently display or provide links to disclosures on a publicly available, easily accessible Web site that is available to current and prospective end users and edge providers as well as to the Commission, and must disclose relevant information at the point of sale. Current end users must be able to easily identify which disclosures apply to their service offering. Broadband providers' online disclosures shall be considered disclosed to the Commission for purposes of monitoring and enforcement. We may require additional disclosures directly to the Commission.

We anticipate that broadband providers may be able to satisfy the transparency rule through a single disclosure, and therefore do not at this time require multiple disclosures targeted at different audiences.[65] We also decline to adopt a specific format for disclosures, and instead require that disclosure be sufficiently clear and accessible to meet the requirements of the rule.[66] We will, however, continue to monitor compliance with this rule, and may require adherence to a particular set of best practices in the future.[67]

Although some commenters assert that a disclosure rule will impose significant burdens on broadband providers, no commenter cites any particular source of increased costs, or attempts to estimate costs of compliance. For a number of reasons, we believe that the costs of the disclosure rule we adopt in this Order are outweighed by the benefits of empowering end users and edge providers to make informed choices and of facilitating the enforcement of the other open Internet rules. First, we require only that providers post disclosures on their Web sites and provide disclosure at the point of sale, not that they bear the cost of printing and distributing bill inserts or other paper documents to all existing customers.[68] Second, although we may subsequently determine that it is appropriate to require that specific information be disclosed in particular ways, the transparency rule we adopt in this Order gives broadband providers some flexibility to determine what information to disclose and how to disclose it. We also expressly exclude from the rule competitively sensitive information, information that would compromise network security, and information that would undermine the efficacy of reasonable network management practices. Third, as discussed below, by setting the effective date of these rules as November 20, 2011, we give broadband providers adequate time to develop cost effective methods of compliance.

A key purpose of the transparency rule is to enable third-party experts such as independent engineers and consumer watchdogs to monitor and evaluate network management practices, in order to surface concerns regarding potential open Internet violations. We also note the existence of free software tools that enable Internet end users and edge providers to monitor and detect blocking and discrimination by broadband providers.[69] Although current tools cannot detect all instances of blocking or discrimination and cannot substitute for disclosure of network management policies, such tools may help supplement the transparency rule we adopt in this Order.[70]

Although transparency is essential for preserving Internet openness, we disagree with commenters that suggest it is alone sufficient to prevent open Internet violations. The record does not convince us that a transparency requirement by itself will adequately constrain problematic conduct, and we therefore adopt two additional rules, as discussed below.

### *C. No Blocking and No Unreasonable Discrimination*

#### 1. No Blocking

The freedom to send and receive lawful content and to use and provide applications and services without fear of blocking is essential to the Internet's openness and to competition in adjacent markets such as voice communications and video and audio programming. Similarly, the ability to connect and use

[65] But we expect that broadband providers will make disclosures in a manner accessible by people with disabilities.

[66] Some commenters advocate for a standard disclosure format. *See, e.g.,* Adam Candeub *et al.* Reply at 7; Level 3 Comments at 13; Sprint Comments at 17. Others support a plain language requirement. *See, e.g.,* NATOA Comments at 7; NJRC Comments at 19; IFTA Comments at 16. Other commenters, however, argue against the imposition of a standard format as inflexible and difficult to implement. *See, e.g.,* Cox Comments at 10; National Telecommunications Cooperative Association (NTCA) Comments at 9; Qwest Comments at 11. The approach we adopt is similar to the approach adopted in the Commission's *Truth-in-Billing Proceeding,* where we set out basic guidelines. *Truth-in-Billing and Billing Format,* First Report and Order and Further NPRM, 14 FCC Rcd 7492, 7495–96, paras. 3–5 (1999).

[67] We may address this issue as part of a separate, ongoing proceeding regarding transparency for communications services more generally. *Consumer Information and Disclosure,* Notice of Inquiry, FCC 09–68 (rel. Aug. 28, 2010). Relatedly, the Commission has begun an effort, in partnership with broadband providers, to measure the actual speed and performance of broadband service, and we expect that the data generated by this effort will inform Commission efforts regarding disclosure. *See Comment Sought on Residential Fixed Broadband Services Testing and Measurement Solution, Pleading Cycle Established,* Public Notice, 25 FCC Rcd 3836 (2010) (SamKnows project); *Comment Sought on Measurement of Mobile Broadband Network Performance and Coverage,* Public Notice, 25 FCC Rcd 7069 (2010) (same).

[68] In a separate proceeding, the Commission has determined that the costs of making disclosure materials available on a service provider's Web site are outweighed by the public benefits where the disclosure requirement applies only to entities already using the Internet for other purposes. *See Standardized and Enhanced Disclosure Requirements for Television Broadcast Licensee Public Interest Obligations,* Report and Order, 23 FCC Rcd 1274, 1277–78, paras. 7–10 (2008).

[69] *See* Sandoval Comments at 4–5. For example, the Max Planck Institute analyzed data collected by the *Glasnost* tool from thousands of end user, and found that broadband providers were discriminating against application-specific traffic. *See* WCB Letter 12/13/10, Attach. at 235–39, Max Planck Institute for Software Systems, Glasnost: Results from Tests for BitTorrent Traffic Blocking, broadband.mpi-sws.org/transparency/results. *Netalyzr* is a National Science Foundation-funded project that tests a wide range of network characteristics. *See* International Computer Science Institute, Netalyzer, netalyzr.icsi.berkeley.edu. Similar tools are being developed for mobile broadband services. *See, e.g.,* WindRider, Mobile Network Neutrality Monitoring System, *http://www.cs.northwestern.edu/~ict992/mobile.htm.*

[70] For an example of a public-private partnership that could encourage the development of new tools to assess network management practices, see FCC Open Internet Apps Challenge, *http://www.openinternet.gov/challenge.*

any lawful devices that do not harm the network helps ensure that end users can enjoy the competition and innovation that result when device manufacturers can depend on networks' openness.[71] Moreover, the no-blocking principle has been broadly accepted since its inclusion in the Commission's *Internet Policy Statement.* Major broadband providers represent that they currently operate consistent with this principle and are committed to continuing to do so.[72]

In the *Open Internet NPRM,* the Commission proposed codifying the original three *Internet Policy Statement* principles that addressed blocking of content, applications and services, and devices. After consideration of the record, we consolidate the proposed rules into a single rule for fixed broadband providers: [73]

*A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.*

The phrase ''content, applications, services'' refers to all traffic transmitted to or from end users of a broadband Internet access service, including traffic that may not fit cleanly into any of these categories.[74] The rule protects only transmissions of lawful content, and does not prevent or restrict a broadband provider from refusing to transmit unlawful material such as child pornography.[75]

We also note that the rule entitles end users to both connect and use any lawful device of their choice, provided such device does not harm the network.[76] A broadband provider may require that devices conform to widely accepted and publicly-available standards applicable to its services.[77]

We make clear that the no-blocking rule bars broadband providers from impairing or degrading particular content, applications, services, or non-harmful devices so as to render them effectively unusable (subject to reasonable network management).[78] Such a prohibition is consistent with the observation of a number of commenters that degrading traffic can have the same effects as outright blocking, and that such an approach is consistent with the traditional interpretation of the Internet Policy Statement. The Commission has recognized that in some circumstances the distinction between blocking and degrading (such as by delaying) traffic is merely ''semantic.''

Some concerns have been expressed that broadband providers may seek to charge edge providers simply for delivering traffic to or carrying traffic from the broadband provider's end-user customers. To the extent that a content, application, or service provider could avoid being blocked only by paying a fee, charging such a fee would not be permissible under these rules.[79]

2. No Unreasonable Discrimination

Based on our findings that fixed broadband providers have incentives and the ability to discriminate in their handling of network traffic in ways that can harm innovation, investment, competition, end users, and free expression, we adopt the following rule:

*A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service. Reasonable network management shall not constitute unreasonable discrimination.*

The rule strikes an appropriate balance between restricting harmful conduct and permitting beneficial forms of differential treatment. As the rule specifically provides, and as discussed below, discrimination by a broadband provider that constitutes ''reasonable network management'' is ''reasonable'' discrimination.[80] We provide further guidance regarding distinguishing reasonable from unreasonable discrimination:

*Transparency.* Differential treatment of traffic is more likely to be reasonable the more transparent to the end user that treatment is. The Commission has previously found broadband provider practices to violate open Internet principles in part because they were not disclosed to end users. Transparency is particularly important with respect to the discriminatory treatment of traffic as it is often difficult for end users to determine the causes of slow or poor performance of content, applications, services, or devices.

*End-User Control.* Maximizing end-user control is a policy goal Congress

[71] The Commission has long protected end users' rights to attach lawful devices that do not harm communications networks. *See, e.g., Use of the Carterfone Device in Message Toll Telephone Service,* 13 FCC 2d 420, 424 (1968); *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry),* Final Decision, 77 FCC 2d 384, 388 (1980); *see also* Michael T. Hoeker, *From Carterfone to the iPhone: Consumer Choice in the Wireless Telecommunications Marketplace,* 17 CommLaw Conspectus 187, 192 (2008); Kevin Werbach, *The Federal Computer Commission,* 84 N.C. L. Rev. 1, 21 (2005).

[72] As Qwest states, ''Qwest and virtually all major broadband providers have supported the FCC Internet Policy Principles and voluntarily abide by those principles as good policy.'' Qwest PN Comments at 2–3, 5; *see also, e.g.,* Comcast Comments at 27; Clearwire Comments at 1; Margaret Boles, *AT&T on Comcast* v. *FCC Decision,* AT&T Pub. Pol'y Blog (Apr. 6, 2010), *attpublicpolicy.com/broadband-policy/att-statement-on-comcast-v-fcc-decision.*

[73] As described below, we adopt a tailored version of this rule for mobile broadband providers.

[74] *See* William Lehr *et al.* Comments at 27 (''While the proposed rules of the FCC appear to make a clear distinction between applications and services on the one hand (rule 3) and content (rule 1), we believe that there will be some activities that do not fit cleanly into these two categories''); PIC Comments at 39; RFC 4924 at 5. For this reason the rule may prohibit the blocking of a port or particular protocol used by an application, without blocking the application completely, unless such practice is reasonable network management. *See* Distributed Computing Industry Ass'n (DCIA) Comments at 7 (discussing work-arounds by P2P companies facing port blocking or other practices); Sandvine Reply at 3; RFC 4924. The rule also is neutral with respect to where in the protocol stack or in the network blocking could occur.

[75] The ''no blocking'' rule does not impose any independent legal obligation on broadband Internet access service providers to be the arbiter of what is lawful. *See, e.g.,* WISPA Comments at 12–13.

[76] We note that MVPDs, pursuant to Section 629 and the Commission's implementing regulations, are already subject to similar requirements that give end users the right to attach devices to an MVPD system provided that the attached equipment does not cause electronic or physical harm or assist in the unauthorized receipt of service. *See Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* Report and Order, 13 FCC Rcd 14775 (1998); 47 U.S.C.. 549; 47 CFR 76.1201–03. Nothing in this Order is intended to alter those existing rules.

[77] For example, a DOCSIS-based broadband provider is not required to support a DSL modem. *See* ACA Comments at 13–14; *see also* Satellite Broadband Commenters Comments at 8–9 (noting that an antenna and associated modem must comply with equipment and protocol standards set by satellite companies, but that ''consumers can [then] attach * * * any personal computer or wireless router they wish'').

[78] We do not find it appropriate to interpret our rule to impose a blanket prohibition on degradation of traffic more generally. Congestion ordinarily results in degradation of traffic, and such an interpretation could effectively prohibit broadband providers from permitting congestion to occur on their networks. Although we expect broadband providers to continue to expand the capacity of their networks—and we believe our rules help ensure that they continue to have incentives to do so—we recognize that some network congestion may be unavoidable. *See, e.g.,* AT&T Comments at 65; TWC Comments at 16–18; Internet Freedom Coalition Reply at 5.

[79] We do not intend our rules to affect existing arrangements for network interconnection, including existing paid peering arrangements.

[80] We also make clear that open Internet protections coexist with other legal and regulatory frameworks. Except as otherwise described in this Order, we do not address the possible application of the no unreasonable discrimination rule to particular circumstances, despite the requests of certain commenters. *See, e.g.,* AT&T Comments at 64–77, 108–12; PAETEC Comments at 13; *see also* AT&T Comments at 56 (arguing that some existing agreements could be at odds with limitations on pay for priority arrangements). Rather, we find it more appropriate to address the application of our rule in the context of an appropriate Commission proceeding with the benefit of a more comprehensive record.

recognized in Section 230(b) of the Communications Act, and end-user choice and control are touchstones in evaluating the reasonableness of discrimination.[81] As one commenter observes, ''letting users choose how they want to use the network enables them to use the Internet in a way that creates more value for them (and for society) than if network providers made this choice,'' and ''is an important part of the mechanism that produces innovation under uncertainty.'' Thus, enabling end users to choose among different broadband offerings based on such factors as assured data rates and reliability, or to select quality-of-service enhancements on their own connections for traffic of their choosing, would be unlikely to violate the no unreasonable discrimination rule, provided the broadband provider's offerings were fully disclosed and were not harmful to competition or end users.[82] We recognize that there is not a binary distinction between end-user controlled and broadband-provider controlled practices, but rather a spectrum of practices ranging from more end-user controlled to more broadband provider-controlled.[83] And we do not suggest that practices controlled entirely by broadband providers are by definition unreasonable.

Some commenters suggest that open Internet protections would prohibit broadband providers from offering their subscribers different tiers of service or from charging their subscribers based on bandwidth consumed. We are, of course, always concerned about anti-consumer or anticompetitive practices, and we remain so here. However, prohibiting tiered or usage-based pricing and requiring all subscribers to pay the same amount for broadband service, regardless of the performance or usage of the service, would force lighter end users of the network to subsidize heavier end users. It would also foreclose practices that may appropriately align incentives to encourage efficient use of networks. The framework we adopt in this Order does not prevent broadband providers from asking subscribers who use the network less to pay less, and subscribers who use the network more to pay more.

*Use-Agnostic Discrimination.* Differential treatment of traffic that does not discriminate among specific uses of the network or classes of uses is likely reasonable. For example, during periods of congestion a broadband provider could provide more bandwidth to subscribers that have used the network less over some preceding period of time than to heavier users. Use-agnostic discrimination (sometimes referred to as application-agnostic discrimination) is consistent with Internet openness because it does not interfere with end users' choices about which content, applications, services, or devices to use. Nor does it distort competition among edge providers.

*Standard Practices.* The conformity or lack of conformity of a practice with best practices and technical standards adopted by open, broadly representative, and independent Internet engineering, governance initiatives, or standards-setting organizations is another factor to be considered in evaluating reasonableness. Recognizing the important role of such groups is consistent with Congress's intent that our rules in the Internet area should not ''fetter[ ]'' the free market with unnecessary regulation,[84] and is consistent with broadband providers' historic reliance on such groups.[85] We make clear, however, that we are not delegating authority to interpret or implement our rules to outside bodies.

In evaluating unreasonable discrimination, the types of practices we would be concerned about include, but are not limited to, discrimination that harms an actual or potential competitor to the broadband provider (such as by degrading VoIP applications or services when the broadband provider offers telephone service), that harms end users (such as by inhibiting end users from accessing the content, applications, services, or devices of their choice), or that impairs free expression (such as by slowing traffic from a particular blog because the broadband provider disagrees with the blogger's message).

For a number of reasons, including those discussed above in Part II.B, a commercial arrangement between a broadband provider and a third party to directly or indirectly favor some traffic over other traffic in the broadband Internet access service connection to a subscriber of the broadband provider (*i.e.,* ''pay for priority'') would raise significant cause for concern.[86] First, pay for priority would represent a significant departure from historical and current practice. Since the beginning of the Internet, Internet access providers have typically not charged particular content or application providers fees to reach the providers' retail service end users or struck pay-for-priority deals, and the record does not contain evidence that U.S. broadband providers currently engage in such arrangements. Second this departure from longstanding norms could cause great harm to innovation and investment in and on the Internet. As discussed above, pay-for-priority arrangements could raise barriers to entry on the Internet by requiring fees from edge providers, as well as transaction costs arising from the need to reach agreements with one or more broadband providers to access a critical mass of potential end users. Fees imposed on edge providers may be excessive because few edge providers have the ability to bargain for lesser fees, and because no broadband provider internalizes the full costs of reduced innovation and the exit of edge providers from the market. Third, pay-for-priority arrangements may particularly harm non-commercial end users, including individual bloggers, libraries, schools, advocacy organizations, and other speakers, especially those who communicate through video or other content sensitive

[81] ''The rapidly developing array of Internet and other interactive computer services * * * offer[ ] users a great degree of control over the information that they receive, as well as *the potential for even greater control in the future* as technology develops.'' 47 U.S.C. 230(a)(1)–(2) (emphasis added).

[82] In these types of arrangements ''[t]he broadband provider does not get any particular leverage, because the ability to select which traffic gets priority lies with individual subscribers. Meanwhile, an entity providing content, applications, or services does not need to worry about striking up relationships with various broadband providers to obtain top treatment. All it needs to worry about is building relationships with users and explaining to those users whether and how they may want to select the particular content, application, or service for priority treatment.'' CDT Comments at 27; *see also* Amazon Comments at 2–3; SureWest Comments at 32–33.

[83] We note that default settings set by broadband providers would likely be considered more broadband provider-controlled than end-user controlled. *See generally* Jason Scott Johnston, *Strategic Bargaining and the Economic Theory of Contract Default Rules,* 100 Yale L.J. 615 (1990); Daniel Kahneman *et al., Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias,* 5 J. Econ. Persp. 193, 197–99 (1991).

[84] 47 U.S.C. 230(b)(2).

[85] Broadband providers' practices historically have relied on the efforts of such groups, which follow open processes conducive to broad participation. *See, e.g.,* William Lehr *et al.* Comments at 24; Comcast Comments at 53–59; FTTH Comments at 12; Internet Society (ISOC) Comments at 1–2; OIC Comments at 50–52; Comcast Reply at 5–7. Moreover, Internet community governance groups develop and encourage widespread implementation of best practices, supporting an environment that facilitates innovation.

[86] The *Open Internet NPRM* proposed a flat ban on discrimination and interpreted that requirement to prohibit broadband providers from ''charg[ing] a content, application, or service provider for enhanced or prioritized access to the subscribers of the broadband Internet access service provider.'' *Open Internet NPRM,* 24 FCC Rcd at 13104–05, paras. 104, 106. In the context of a ''no unreasonable discrimination'' rule that leaves interpretation to a case-by-case process, we instead adopt the approach to pay for priority described in this paragraph.

to network congestion. Even open Internet skeptics acknowledge that pay for priority may disadvantage non-commercial uses of the network, which are typically less able to pay for priority, and for which the Internet is a uniquely important platform. Fourth, broadband providers that sought to offer pay-for-priority services would have an incentive to limit the quality of service provided to non-prioritized traffic. In light of each of these concerns, as a general matter, it is unlikely that pay for priority would satisfy the ''no unreasonable discrimination'' standard. The practice of a broadband Internet access service provider prioritizing its own content, applications, or services, or those of its affiliates, would raise the same significant concerns and would be subject to the same standards and considerations in evaluating reasonableness as third-party pay-for-priority arrangements.[87]

Because we agree with the diverse group of commenters who argue that any nondiscrimination rule should prohibit only unreasonable discrimination, we decline to adopt the more rigid nondiscrimination rule proposed in the *Open Internet NPRM.* A strict nondiscrimination rule would be in tension with our recognition that some forms of discrimination, including end-user controlled discrimination, can be beneficial. The rule we adopt provides broadband providers' sufficient flexibility to develop service offerings and pricing plans, and to effectively and reasonably manage their networks. We disagree with commenters who argue that a standard based on ''reasonableness'' or ''unreasonableness'' is too vague to give broadband providers fair notice of what is expected of them. This is not so. ''Reasonableness'' is a well-established standard for regulatee conduct.[88] As other commenters have pointed out, the term ''reasonable'' is ''both administrable and indispensable to the sound administration of the nation's telecommunications laws.''[89]

We also reject the argument that only ''anticompetitive'' discrimination yielding ''substantial consumer harm'' should be prohibited by our rules. We are persuaded those proposed limiting terms are unduly narrow and could allow discriminatory conduct that is contrary to the public interest. The broad purposes of this rule—to encourage competition and remove impediments to infrastructure investment while protecting consumer choice, free expression, end-user control, and the ability to innovate without permission—cannot be achieved by preventing only those practices that are demonstrably anticompetitive or harmful to consumers. Rather, the rule rests on the general proposition that broadband providers should not pick winners and losers on the Internet—even for reasons that may be independent of providers' competitive interests or that may not immediately or demonstrably cause substantial consumer harm.[90]

We disagree with commenters who argue that a rule against unreasonable discrimination violates Section 3(51) of the Communications Act for those broadband providers that are telecommunications carriers but do not provide their broadband Internet access service as a telecommunications service.[91] Section 3(51) provides that a ''telecommunications carrier shall be treated as a common carrier under this Act only to the extent that it is engaged in providing telecommunications services.'' [92] This limitation is not relevant to the Commission's actions here.[93] The hallmark of common

[87] We reject arguments that our approach to pay-for-priority arrangements is inconsistent with allowing content-delivery networks (CDNs). *See, e.g.,* Cisco Comments at 11–12; TWC Comments at 21–22, 65, 89–90; AT&T Reply at 49–53; Bright House Reply at 9. CDN services are designed to reduce the capacity requirements and costs of the CDN's edge provider clients by hosting the content for those clients closer to end users. Unlike broadband providers, third-party CDN providers do not control the last-mile connection to the end user. And CDNs that do not deploy within an edge provider's network may still reach an end user via the user's broadband connection. *See* CDT Comments at 25 n.84; George Ou Comments (Preserving the Open and Competitive Bandwidth Market) at 3; *see also* Cisco Comments at 11; FTTH Comments at 23–24. Moreover, CDNs typically provide a benefit to the sender and recipient of traffic without causing harm to third-party traffic. Though we note disagreement regarding the impact of CDNs on other traffic, the record does not demonstrate that the use of CDNs has any material adverse effect on broadband end users' experience of traffic that is not delivered via a CDN. *Compare* Letter from S. Derek Turner, Free Press, to Chairman Genachowski *et al.,* FCC, GN Docket No. 09–191, WC Docket No. 07–52, at 1–2 (filed July 29, 2010) *with* Letter from Richard Bennett, ITIF, to Chairman Genachowski *et al.,* FCC, GN Docket No. 09–191, WC Docket No. 07–52, Attach. at 12 (filed Aug. 9, 2010). Indeed, the same benefits derived from using CDNs can be achieved if an edge provider's own servers happen to be located in close proximity to end users. Everything on the Internet that is accessible to an end user is not, and cannot be, in equal proximity from that end user. *See* John Staurulakis Inc. Comments at 5; Bret T. Swanson Reply at 4. Finally, CDN providers unaffiliated with broadband providers generally do not compete with edge providers and thus generally lack economic incentives (or the ability) to discriminate against edge providers. *See* Akamai Comments at 12; NASUCA Reply at 7; NCTA Reply at 25. We likewise reject proposals to limit our rules to actions taken at or below the ''network layer.'' *See, e.g.,* Google Comments at 24–26; Vonage Reply at 2; CDT Reply at 18; Prof. Scott Jordan (Jordan) Comments at 3; *see also* Scott Jordan, *A Layered Network Approach to Net Neutrality,* Int'l J. of Commc'n 427, 432–33 (2007) (describing the OSI layers model and the actions of routers at and below the network layer) *attached to* Letter from Scott Jordan, Professor, University of California–Irvine, to Office of the Secretary, FCC, GN Docket No. 09–191, WC Docket No. 07–52 (filed Mar. 22, 2010). We are not persuaded that the proposed limitation is necessary or appropriate in this context.

[88] As recently as 1995, Congress adopted the venerable ''reasonableness'' standard when it recodified provisions of the Interstate Commerce Act. ICC Termination Act of 1995, Public Law 104–88, sec. 106(a) (now codified at 49 U.S.C. 15501).

[89] AT&T Reply at 33–34 (''And no one has seriously suggested that Section 202 should itself be amended to remove the 'unreasonable' qualifier on the ground that the qualifier is too 'murky' or 'complex.' Seventy-five years of experience have shown that qualifier to be both administrable and indispensable to the sound administration of the nation's telecommunications laws.''); *see also* Comcast Reply at 26 (''[T]he Commission should embrace the strong guidance against an overbroad rule and, instead, develop a standard based on 'unreasonable and anticompetitive discrimination.' ''); Sprint Reply at 23 (''The unreasonable discrimination standard contained in Section 202(a) of the Act contains the very flexibility the Commission needs to distinguish desirable from improper discrimination.''); *Thomas* v. *Chicago Park District,* 534 U.S. 316, 324 (2002) (holding that denial of a permit ''when the intended use would present an unreasonable danger to the health and safety of park users or Park District employees'' is a standard that is ''reasonably specific and objective, and do[es] not leave the decision 'to the whim of the administrator' '') (citation omitted); *Cameron* v. *Johnson,* 390 U.S. 611, 615–16 (1968) (stating that ''unreasonably'' ''is a widely used and well understood word, and clearly so when juxtaposed with 'obstruct' and 'interfere' '').

[90] For example, slowing BitTorrent packets might only affect a few end users, but it would harm BitTorrent. More significantly, it would raise concerns among other end users and edge providers that their traffic could be slowed for any reason—or no reason at all—which could in turn reduce incentives to innovate and invest, and change the fundamental nature of the Internet as an open platform.

[91] *See, e.g.,* AT&T Comments at 209–11; Verizon Comments at 93–95; CTIA PN Reply at 20–21. We do not read the Supreme Court's decision in *FCC* v. *Midwest Video Corp.* as addressing rules like the rules we adopt in this Order. 440 U.S. 689 (1979). There, the Court held that obligations on cable providers to ''hold out dedicated channels on a first-come, nondiscriminatory basis * * * relegated cable systems, *pro tanto,* to common-carrier status.'' *Id.* at 700–01. None of the rules adopted in this Order requires a broadband provider to ''hold out'' any capacity for the exclusive use of third parties or make a public offering of its service.

[92] 47 U.S.C. 153(51). Section 332(c)(2) contains a restriction similar to that of sec. 3(51): ''A person engaged in the provision of a service that is a private mobile service shall not, insofar as such person is so engaged, be treated as a common carrier for any purpose under this Act.'' *Id.* sec. 332(c)(2). Because we are not imposing any common carrier obligations on any broadband provider, including providers of ''private mobile service'' as defined in Section 332(d)(3), our requirements do not violate the limitation in Section 332(c)(2).

[93] Courts have acknowledged that the Commission is entitled to deference in interpreting the definition of ''common carrier.'' *See AT&T* v. *FCC,* 572 F.2d 17, 24 (2d Cir. 1978) (citing *Red Lion Broad. Co.* v. *FCC,* 395 U.S. 367, 381 (1969)). In adopting the rule against unreasonable

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carriage is an ''undertak[ing] to carry for all people indifferently.'' [94] An entity ''will not be a common carrier where its practice is to make individualized decisions, in particular cases, whether and on what terms to deal'' with potential customers.[95] The customers at issue here are the end users who subscribe to broadband Internet access services.[96] With respect to those customers, a broadband provider may make individualized decisions. A broadband provider that chooses not to offer its broadband Internet access service on a common carriage basis can, for instance, decide on a case-by-case basis whether to serve a particular end user, what connection speed(s) to offer, and at what price. The open Internet rules become effective only *after* such a provider has voluntarily entered into a mutually satisfactory arrangement with the end user, which may be tailored to that user. Even then, as discussed above, the allowance for reasonable disparities permits customized service features such as those that enhance end user control over what Internet content is received. This flexibility to customize service arrangements for a particular customer is the hallmark of private carriage, which is the antithesis of common carriage.[97]

*D. Reasonable Network Management*

Since at least 2005, when the Commission adopted the *Internet Policy Statement,* we have recognized that a flourishing and open Internet requires robust, well-functioning broadband networks, and accordingly that open Internet protections require broadband providers to be able to reasonably manage their networks. The open Internet rules we adopt in this Order expressly provide for and define ''reasonable network management'' in order to provide greater clarity to broadband providers, network equipment providers, and Internet end users and edge providers regarding the types of network management practices that are consistent with open Internet protections.

In the *Open Internet NPRM,* the Commission proposed that open Internet rules be subject to reasonable network management, consisting of ''reasonable practices employed by a provider of broadband Internet access service to: (1) Reduce or mitigate the effects of congestion on its network or to address quality-of-service concerns; (2) address traffic that is unwanted by users or harmful; (3) prevent the transfer of unlawful content; or (4) prevent the unlawful transfer of content.'' The proposed definition also stated that reasonable network management consists of ''other reasonable network management practices.''

Upon reviewing the record, we conclude that the definition of reasonable network management should provide greater clarity regarding the standard used to gauge reasonableness, expressly account for technological differences among networks that may affect reasonable network management, and omit elements that do not relate directly to network management functions and are therefore better handled elsewhere in the rules—for example, measures to prevent the transfer of unlawful content. We therefore adopt the following definition of reasonable network management:

*A network management practice is reasonable if it is appropriate and tailored to achieving a legitimate network management purpose, taking into account the particular network architecture and technology of the broadband Internet access service.*

Legitimate network management purposes include: ensuring network security and integrity, including by addressing traffic that is harmful to the network; addressing traffic that is unwanted by end users (including by premise operators), such as by providing services or capabilities consistent with an end user's choices regarding parental controls or security capabilities; and reducing or mitigating the effects of congestion on the network. The term ''particular network architecture and technology'' refers to the differences across access platforms such as cable, DSL, satellite, and fixed wireless.

As proposed in the *Open Internet NPRM,* we will further develop the scope of reasonable network management on a case-by-case basis, as complaints about broadband providers' actual practices arise. 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.

In taking this approach, we recognize the need to balance clarity with flexibility.[98] We discuss below certain

discrimination, we rely, in part, on our authority under section 706, which is not part of the Communications Act. Congress enacted section 706 as part of the Telecommunications Act of 1996 and more recently codified the provision in Chapter 12 of Title 47, at 47 U.S.C. 1302. The seven titles that comprise the Communications Act appear in Chapter 5 of Title 47. Consequently, even if the rule against unreasonable discrimination were interpreted to require common carriage in a particular case, that result would not run afoul of Section 3(51) because a network operator would be treated as a common carrier pursuant to Section 706, not ''under'' the Communications Act.

[94] *Nat'l Ass'n of Reg. Util. Comm'rs* v. *FCC,* 525 F.2d 630, 641 (DC Cir. 1976) (*NARUC I*) (quoting *Semon* v. *Royal Indemnity Co.,* 279 F.2d 737, 739 (5th Cir. 1960) and other cases); *see also* Verizon Comments at 93 (''[T]he primary sine qua non of common carrier status is a quasi-public character, which arises out of the undertaking 'to carry for all people indifferently * * *.' '' (quoting *Nat'l Ass'n of Reg. Util. Comm'rs* v. *FCC,* 533 F.2d 601, 608 (DC Cir. 1976) (*NARUC II*)). *But see* CTIA Reply at 57 (suggesting that nondiscrimination is the *sine qua non* of common carrier regulation referred to in *NARUC II*).

[95] *NARUC I,* 525 F.2d at 641 (citing *Semon,* 279 F.2d at 739–40). Commenters assert that any obligation that is similar to an obligation that appears in Title II of the Act is a ''common carrier'' obligation. *See, e.g.,* AT&T Comments at 210–11. We disagree. Just because an obligation appears within Title II does not mean that the imposition of that obligation or a similar one results in ''treating'' an entity as a common carrier. For the meaning of common carriage treatment, which is not defined in the Act, we look to caselaw as discussed in the text.

[96] Even if edge providers were considered ''customers'' of the broadband provider, the broadband provider would not be a common carrier with regard to the role it plays in transmitting edge providers' traffic. Our rules permit broadband providers to engage in reasonable network management and, under certain circumstances, block traffic and devices, engage in reasonable discrimination, and prioritize traffic at subscribers' request. Blocking or deprioritizing certain traffic is far from ''undertak[ing] to carry for all [edge providers] indifferently.'' *See NARUC I,* 525 F.2d at 641.

[97] *See Sw. Bell Tel. Co.* v. *FCC,* 19 F.3d 1475, 1481 (DC Cir. 1994) (''If the carrier chooses its clients on an individual basis and determines in each particular case whether and on what terms to serve and there is no specific regulatory compulsion to serve all indifferently, the entity is a private carrier for that particular service and the Commission is not at liberty to subject the entity to regulation as a common carrier.'') (internal quotation marks omitted). Although promoting competition throughout the Internet ecosystem is a central purpose of these rules, we decline to adopt as a rule the *Internet Policy Statement* principle regarding consumers' entitlement to competition. We agree with those commenters that argue that the principle is too vague to be reduced to a rule and that the proposed rule as stated failed to provide any meaningful guidance regarding what conduct is and is not permissible. *See, e.g.,* Verizon Comments at 4, 53; TPPF Comments at 7. A rule barring broadband providers from depriving end users of their entitlement to competition does not appear to be a viable method of promoting competition. We also do not wish to duplicate competitive analyses carried out by the Department of Justice, the FTC, or the Commission's merger review process.

[98] Some parties contend that there will be uncertainty associated with open Internet rules, subject to reasonable network management, which will limit provider flexibility, stifle innovation, and slow providers' response time in managing their networks. *See, e.g.,* ADTRAN Comments at 11–13; Barbara Esbin (Esbin) Comments at 7. For example, some parties express concern that that the definition proposed in the *Open Internet NPRM* provided insufficient guidance regarding what standard will be used to determine whether a given practice is ''reasonable.'' *See, e.g.,* ADTRAN Comments at 13; AT&T Comments at 13; CDT Comments at 38; PIC Comments at 35–36, 39; Texas PUC Comments at 6–7; Verizon Reply at 8, 75, 78. Others contend that although clarity is needed, the Commission should not list categories of activities considered reasonable. *See, e.g.,* Free Press Comments at 82, 85–86. We seek to balance these interests through general rules designed to give

principles and considerations that will inform the Commission's case-by-case analysis. Further, although broadband providers are not required to seek permission from the Commission before deploying a network management practice, they or others are free to do so, for example by seeking a declaratory ruling.[99]

We reject proposals to define reasonable network management practices more expansively or more narrowly than stated above. We agree with commenters that the Commission should not adopt the ''narrowly or carefully tailored'' standard discussed in the *Comcast Network Management Practices Order.*[100] We find that this standard is unnecessarily restrictive and may overly constrain network engineering decisions. Moreover, the ''narrowly tailored'' language could be read to import strict scrutiny doctrine from constitutional law, which we are not persuaded would be helpful here. Broadband providers may employ network management practices that are appropriate and tailored to the network management purpose they seek to achieve, but they need not necessarily employ the most narrowly tailored practice theoretically available to them.

We also acknowledge that reasonable network management practices may differ across platforms. For example, practices needed to manage congestion on a fixed satellite network may be inappropriate for a fiber-to-the-home network. We also recognize the unique network management challenges facing broadband providers that use unlicensed spectrum to deliver service to end users. Unlicensed spectrum is shared among multiple users and technologies and no single user can control or assure access to the spectrum. We believe the concept of reasonable network management is sufficiently flexible to afford such providers the latitude they need to effectively manage their networks.[101]

The principles guiding case-by-case evaluations of network management practices are much the same as those that guide assessments of ''no unreasonable discrimination,'' and include transparency, end-user control, and use- (or application-) agnostic treatment. We also offer guidance in the specific context of the legitimate network management purposes listed above.

*Network Security or Integrity and Traffic Unwanted by End Users.* Broadband providers may implement reasonable practices to ensure network security and integrity, including by addressing traffic that is harmful to the network.[102] Many commenters strongly support allowing broadband providers to implement such network management practices. Some commenters, however, express concern that providers might implement anticompetitive or otherwise problematic practices in the name of protecting network security. We make clear that, for the singling out of any specific application for blocking or degradation based on harm to the network to be a reasonable network management practice, a broadband provider should be prepared to provide a substantive explanation for concluding that the particular traffic is harmful to the network, such as traffic that constitutes a denial-of-service attack on specific network infrastructure elements or exploits a particular security vulnerability.

Broadband providers also may implement reasonable practices to address traffic that a particular end user chooses not to receive. Thus, for example, a broadband provider could provide services or capabilities consistent with an end user's choices regarding parental controls, or allow end users to choose a service that provides access to the Internet but not to pornographic Web sites. Likewise, a broadband provider serving a premise operator could restrict traffic unwanted by that entity, though such restrictions should be disclosed. Our rule will not impose liability on a broadband provider where such liability is prohibited by Section 230(c)(2) of the Act.[103]

We note that, in some cases, mechanisms that reduce or eliminate some forms of harmful or unwanted traffic may also interfere with legitimate network traffic. Such mechanisms must be appropriate and tailored to the threat; should be evaluated periodically as to their continued necessity; and should allow end users to opt-in or opt-out if possible.[104] Disclosures of network management practices used to address network security or traffic a particular end user does not want to receive should clearly state the objective of the mechanism and, if applicable, how an end user can opt in or out of the practice.

*Network Congestion.* Numerous commenters support permitting the use of reasonable network management practices to address the effects of congestion, and we agree that congestion management may be a legitimate network management purpose. For example, broadband providers may need to take reasonable steps to ensure that heavy users do not crowd out others. 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 modem subscribers in a particular neighborhood are experiencing congestion, it may be reasonable for a broadband provider to temporarily limit

providers sufficient flexibility to implement necessary network management practices, coupled with guidance regarding certain principles and considerations that will inform the Commission's case-by-case analysis.

[99] *See* 47 CFR 1.2 (providing for ''a declaratory ruling terminating a controversy or removing uncertainty'').

[100] *See Comcast Network Management Practices Order,* 23 FCC Rcd at 13055–56, para. 47 (stating that, to be considered ''reasonable'' a network management practice ''should further a critically important interest and be narrowly or carefully tailored to serve that interest''); *see also* AT&T Comments at 186–87 (arguing that the *Comcast* standard is too narrow); Level 3 Comments at 14; PAETEC Comments at 17–18. *But see* Free Press Comments at 91–92 (stating that the Commission should not retreat from the fundamental framework of the *Comcast* standard). A ''reasonableness'' standard also has the advantage of being administrable and familiar.

[101] *See* Appendix A, sec. 8.11. We recognize that the standards for fourth-generation (4G) wireless networks include the capability to prioritize particular types of traffic, and that other broadband Internet access services may incorporate similar features. Whether particular uses of these technologies constitute reasonable network management will depend on whether they are appropriate and tailored to achieving a legitimate network management purpose.

[102] In the context of broadband Internet access service, techniques to ensure network security and integrity are designed to protect the access network and the Internet against actions by malicious or compromised end systems. Examples include spam, botnets, and distributed denial of service attacks. Unwanted traffic includes worms, malware, and viruses that exploit end-user system vulnerabilities; denial of service attacks; and spam. *See* IETF, Report from the IAB workshop on Unwanted Traffic March 9–10, 2006, RFC 4948, at 31 (Aug. 2007), *available at http://www.rfc-editor.org/rfc/rfc4948.txt.*

[103] *See* 47 U.S.C. 230(c)(2) (no provider of an interactive computer service shall be held liable on account of ''(A) any action voluntarily taken in good faith to restrict access to or availability of material that the provider or user considers to be obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable, whether or not such material is constitutionally protected; or (B) any action taken to enable or make available to information content providers or others the technical means to restrict access to material described in [subparagraph (A)]'').

[104] For example, a network provider might be able to assess a network endpoint's posture—see IETF, Network Endpoint Assessment (NEA): Overview and Requirements, RFC 5209 (Jun. 2008); Internet Engineering Task Force, PA–TNC: A Posture Attribute (PA) Protocol Compatible with Trusted Network Connect (TNC), RFC 5792 (Mar. 2010)—and tailor port blocking accordingly. With the posture assessment, an end user might then opt out of the network management mechanism by upgrading the operating system or installing a suitable firewall.

the bandwidth available to individual end users in that neighborhood who are using a substantially disproportionate amount of bandwidth.

We emphasize that reasonable network management practices are not limited to the categories described here, and that broadband providers may take other reasonable steps to maintain the proper functioning of their networks, consistent with the definition of reasonable network management we adopt. As we stated in the *Open Internet NPRM,* ''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.'' Broadband providers should have flexibility to experiment, innovate, and reasonably manage their networks.

*E. Mobile Broadband*

There is one Internet, which should remain open for consumers and innovators alike, although it may be accessed through different technologies and services. The record demonstrates the importance of freedom and openness for mobile broadband networks, and the rationales for adopting high-level open Internet rules, discussed above, are for the most part as applicable to mobile broadband as they are to fixed broadband. Consumer choice, freedom of expression, end-user control, competition, and the freedom to innovate without permission are as important when end users are accessing the Internet via mobile broadband as via fixed. And there have been instances of mobile providers blocking certain third-party applications, particularly applications that compete with the provider's own offerings; relatedly, concerns have been raised about inadequate transparency regarding network management practices. We also note that some mobile broadband providers affirmatively state they do not oppose the application of openness rules to mobile broadband.

However, as explained in the *Open Internet NPRM* and subsequent Public Notice, mobile broadband presents special considerations that suggest differences in how and when open Internet protections should apply. Mobile broadband is an earlier-stage platform than fixed broadband, and it is rapidly evolving. For most of the history of the Internet, access has been predominantly through fixed platforms—first dial-up, then cable modem and DSL services. As of a few years ago, most consumers used their mobile phones primarily to make phone calls and send text messages, and most mobile providers offered Internet access only via ''walled gardens'' or stripped down Web sites. Today, however, mobile broadband is an important Internet access platform that is helping drive broadband adoption, and data usage is growing rapidly. The mobile ecosystem is experiencing very rapid innovation and change, including an expanding array of smartphones, aircard modems, and other devices that enable Internet access; the emergence and rapid growth of dedicated-purpose mobile devices like e-readers; the development of mobile application (''app'') stores and hundreds of thousands of mobile apps; and the evolution of new business models for mobile broadband providers, including usage-based pricing.

Moreover, most consumers have more choices for mobile broadband than for fixed (particularly fixed wireline) broadband.[105] Mobile broadband speeds, capacity, and penetration are typically much lower than for fixed broadband, though some providers have begun offering 4G service that will enable offerings with higher speeds and capacity and lower latency than previous generations of mobile service.[106] In addition, existing mobile networks present operational constraints that fixed broadband networks do not typically encounter. This puts greater pressure on the concept of ''reasonable network management'' for mobile providers, and creates additional challenges in applying a broader set of rules to mobile at this time. Further, we recognize that there have been meaningful recent moves toward openness in and on mobile broadband networks, including the introduction of third-party devices and applications on a number of mobile broadband networks, and more open mobile devices. In addition, we anticipate soon seeing the effects on the market of the openness conditions we imposed on mobile providers that operate on upper 700 MHz C Block (''C Block'') spectrum,[107] which includes Verizon Wireless, one of the largest mobile wireless carriers in the U.S.

In light of these considerations, we conclude it is appropriate to take measured steps at this time to protect the openness of the Internet when accessed through mobile broadband. We apply certain of the open Internet rules, requiring compliance with the transparency rule and a basic no-blocking rule.[108]

1. Application of Openness Principles to Mobile Broadband

a. Transparency

The wide array of commenters who support a disclosure requirement generally agree that all broadband providers, including mobile broadband providers, should be required to disclose their network management practices. Although some mobile broadband providers argue that the dynamic nature of mobile network management makes meaningful disclosure difficult, we conclude that end users need a clear understanding of network management practices, performance, and commercial terms, regardless of the broadband platform they use to access the Internet. Although a number of mobile broadband

[105] *Compare* National Broadband Plan at 37 (Exh. 4–A) *with* 39–40 (Exh. 4–E). However, in many areas of the country, particularly in rural areas, there are fewer options for mobile broadband. *See Fourteenth Wireless Competition Report* at para. 355, tbl. 39 & chart 48. This may result in some consumers having fewer options for mobile broadband than for fixed.

[106] Some fixed broadband providers contend that current mobile broadband offerings directly compete with their offerings. *See* Letter from Michael D. Saperstein, Jr., Director of Regulatory Affairs, Frontier Communications, to Marlene Dortch, Secretary, FCC, GN Docket No. 09–191 (filed Dec. 15, 2010) (discussing entry of wireless service into the broadband market and its effect on wireline broadband subscribership) and Attach. at 1 (citing reports that LTE is ''a very practical and encouraging substitution for DSL, particularly when you look at rural markets''); Letter from Malena F. Barzilai, Federal Government Affairs, Windstream Communications, Inc., to Marlene Dortch, Secretary, FCC, GN Docket No. 09–191 (filed Dec. 15, 2010). As part of our ongoing monitoring, we will track such competition and any impact these rules may have on it.

[107] The first network using spectrum subject to these rules has recently started offering service. *See* Press Release, Verizon Wireless, Blazingly Fast: Verizon Wireless Launches The World's Largest 4G LTE Wireless Network On Sunday, Dec. 5 (Dec. 5, 2010), *available at news.vzw.com/news/2010/12/pr2010-12-03.html.* Specifically, licensees subject to the rule must provide an open platform for third-party applications and devices. *See 700 MHz Second Report and Order,* 22 FCC Rcd 15289; 47 CFR 27.16. The rules we adopt in this Order are independent of those open platform requirements. We expect our observations of how the 700 MHz open platform rules affect the mobile broadband sector to inform our ongoing analysis of the application of openness rules to mobile broadband generally. *700 MHz Second Report and Order,* 22 FCC Rcd at 15364–65, 15374, paras. 205, 229. A number of commenters support the Commission's waiting to determine whether to apply openness rules to mobile wireless until the effects of the C Block openness requirement can be observed. *See, e.g.,* AT&T PN Reply, at 32–37; Cricket PN Reply at 11. We also note that some providers tout openness as a competitive advantage. *See, e.g.,* Clearwire Comments at 7; Verizon Reply at 47–52.

[108] We note that section 332(a) requires us, ''[i]n taking actions to manage the spectrum to be made available for use by the private mobile service,'' to consider various factors, including whether our actions will ''improve the efficiency of spectrum use and reduce the regulatory burden,'' and ''encourage competition.'' 47 U.S.C. 332(a)(2), (3). To the extent section 332(a) applies to our actions in this Order, we note that we have considered these factors.

providers have adopted voluntary codes of conduct regarding disclosure, we believe that a uniform rule applicable to all mobile broadband providers will best preserve Internet openness by ensuring that end users have sufficient information to make informed choices regarding use of the network; and that content, application, service, and device providers have the information needed to develop, market, and maintain Internet offerings. The transparency rule will also aid the Commission in monitoring the evolution of mobile broadband and adjusting, as appropriate, the framework adopted in this Order.

Therefore, as stated above, we require mobile broadband providers to follow the same transparency rule applicable to fixed broadband providers. Further, although we do not require mobile broadband providers to allow third-party devices or all third-party applications on their networks, we nonetheless require mobile broadband providers to disclose their third-party device and application certification procedures, if any; to clearly explain their criteria for any restrictions on use of their network; and to expeditiously inform device and application providers of any decisions to deny access to the network or of a failure to approve their particular devices or applications. With respect to the types of disclosures required to satisfy the rule, we direct mobile broadband providers to the discussion in Part III.B, above. Additionally, mobile broadband providers should follow the guidance the Commission provided to licensees of the upper 700 MHz C Block spectrum regarding compliance with their disclosure obligations, particularly regarding disclosure to third-party application developers and device manufacturers of criteria and approval procedures (to the extent applicable).[109] For example, these disclosures include, to the extent applicable, establishing a transparent and efficient approval process for third parties, as set forth in Section 27.16(d).[110]

b. No Blocking

We adopt a no blocking rule that guarantees end users' access to the Web and protects against mobile broadband providers' blocking applications that compete with their other primary service offering—voice and video telephony—while ensuring that mobile broadband providers can engage in reasonable network management:

> A person engaged in the provision of mobile broadband Internet access service, insofar as such person is so engaged, shall not block consumers from accessing lawful Web sites, subject to reasonable network management; nor shall such person block applications that compete with the provider's voice or video telephony services, subject to reasonable network management.

We understand a ''provider's voice or video telephony services'' to include a voice or video telephony service provided by any entity in which the provider has an attributable interest.[111] We emphasize that the rule protects any and all applications that compete with a mobile broadband provider's voice or video telephony services. Further, degrading a particular Web site or an application that competes with the provider's voice or video telephony services so as to render the Web site or application effectively unusable would be considered tantamount to blocking (subject to reasonable network management).

End users expect to be able to access any lawful Web site through their broadband service, whether fixed or mobile. Web browsing continues to generate the largest amount of mobile data traffic, and applications and services are increasingly being provisioned and used entirely through the Web, without requiring a standalone application to be downloaded to a device. Given that the mobile Web is well-developed relative to other mobile applications and services, and enjoys similar expectations of openness that characterize Web use through fixed broadband, we find it appropriate to act here. We also recognize that accessing a Web site typically does not present the same network management issues that downloading and running an app on a device may present. At this time, a prohibition on blocking access to lawful Web sites (including any related traffic transmitted or received by any plug-in, scripting language, or other browser extension) appropriately balances protection for the ability of end users to access content, applications, and services through the Web and assurance that mobile broadband providers can effectively manage their mobile broadband networks.

Situations have arisen in which mobile wireless providers have blocked third-party applications that arguably compete with their telephony offerings.[112] This type of blocking confirms that mobile broadband providers may have strong incentives to limit Internet openness when confronted with third-party applications that compete with their telephony services. Some commenters express concern that wireless providers could favor their own applications over the applications of unaffiliated developers, under the guise of reasonable network management. A number of commenters assert that blocking or hindering the delivery of services that compete with those offered by the mobile broadband provider, such as over-the-top VoIP, should be prohibited. According to Skype, for example, there is ''a consensus that at a minimum, a 'no blocking' rule should apply to voice and video applications that compete with broadband network operators' own service offerings.'' Clearwire argues that the Commission should restrict only practices that appear to have an element of anticompetitive intent. Although some commenters support a broader no-blocking rule, we believe that a targeted prophylactic rule is appropriate at this

[109] *700 MHz Second Report and Order,* 22 FCC Rcd at 15371–72, para. 224 (''[A] C Block licensee must publish [for example, by posting on the provider's Web site] standards no later than the time at which it makes such standards available to any preferred vendors (*i.e.,* vendors with whom the provider has a relationship to design products for the provider's network). We also require the C Block licensee to provide to potential customers notice of the customers' rights to request the attachment of a device or application to the licensee's network, and notice of the licensee's process for customers to make such requests, including the relevant network criteria.'').

[110] *See* 47 CFR 27.16(d) (''Access requests. (1) Licensees shall establish and publish clear and reasonable procedures for parties to seek approval to use devices or applications on the licensees' networks. A licensee must also provide to potential customers notice of the customers' rights to request the attachment of a device or application to the licensee's network, and notice of the licensee's process for customers to make such requests, including the relevant network criteria. (2) If a licensee determines that a request for access would violate its technical standards or regulatory requirements, the licensee shall expeditiously provide a written response to the requester specifying the basis for denying access and providing an opportunity for the requester to modify its request to satisfy the licensee's concerns.'').

[111] For the purposes of these rules, an attributable interest includes equity ownership interest in or *de facto* control of, or by, the entity that provides the voice or video telephony service. An attributable interest also includes any exclusive arrangement for such voice or video telephony service, including *de facto* exclusive arrangements.

[112] *See, e.g.,* Letter from James W. Cicconi, AT&T Services, Inc., to Ruth Milkman, Chief, Wireless Telecommunications Bureau, FCC, RM–11361, RM–11497 at 6–8 (filed Aug. 21, 2009); DISH PN Reply at 7 (''VoIP operators such as Skype have faced significant difficulty in gaining access across wireless Internet connections.''). Mobile providers blocking VoIP services is an issue not only in the United States, but worldwide. In Europe, the Body of European Regulators for Electronic Communications reported, among other issues, a number of cases of blocking or charging extra for VoIP services by certain European mobile operators. *See* European Commission, Information Society and Media Directorate-General Report on the Public Consultation on ''The Open Internet and Net Neutrality in Europe'' 2, (Nov. 9, 2010), *ec.europa.eu/information_society/policy/ecomm/library/public_consult/net_neutrality/index_en.htm.*

time,[113] and necessary to deter this type of behavior in the future.

The prohibition on blocking applications that compete with a broadband provider's voice or video telephony services does not apply to a broadband provider's operation of application stores or their functional equivalent. In operating app stores, broadband providers compete directly with other types of entities, including device manufacturers and operating system developers,[114] and we do not intend to limit mobile broadband providers' flexibility to curate their app stores similar to app store operators that are not subject to these rules.

As indicated in Part III.D above, the reasonable network management definition takes into account the particular network architecture and technology of the broadband Internet access service. Thus, in determining whether a network management practice is reasonable, the Commission will consider technical, operational, and other differences between wireless and other broadband Internet access platforms, including differences relating to efficient use of spectrum. We anticipate that conditions in mobile broadband networks may necessitate network management practices that would not be necessary in most fixed networks, but conclude that our definition of reasonable network management is flexible enough to accommodate such differences.

[113] *See* Letter from Jonathan Spalter, Chairman, Mobile Future, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09–191 & 10–127, at 3 n.16 (filed Dec. 13, 2010) (supporting tailored prohibition on blocking applications), *citing* AT&T Comments at 65; T–Mobile Comments, Declaration of Grant Castle at 4. The no blocking rule that we adopt for mobile broadband involves distinct treatment of applications that compete with the provider's voice and video telephony services, whereas we have adopted a broader traffic-based approach for fixed broadband. We acknowledge that this rule for mobile broadband may lead in some limited measure to the traffic-identification difficulties discussed with respect to fixed broadband. We find, however, that the reasons for taking our cautious approach to mobile broadband outweigh this concern, particularly in light of our intent to monitor developments involving mobile broadband, including this and other aspects of the practical implementation of our rules.

[114] For example, app stores are operated by manufacturers and operating system developers such as Nokia, Apple, RIM, Google, Microsoft, and third parties such as GetJar. *See also* AT&T PN Comments at 63–66 (emphasizing the competitiveness of the market for mobile apps, including the variety of sources from which consumers may obtain applications); T-Mobile PN Comments at 21 (''The competitive wireless marketplace will continue to discipline app store owners * * * that exclude third-party apps from their app stores entirely, eliminating the need for Commission action.''). We note, however, that for a few devices, such as Apple's iPhone, there may be fewer options for accessing and distributing apps.

2. Ongoing Monitoring

Although some commenters support applying the no unreasonable discrimination rule to mobile broadband,[115] for the reasons discussed above, we decline to do so, preferring at this time to put in place basic openness protections and monitor the development of the mobile broadband marketplace. We emphasize that our decision to proceed incrementally with respect to mobile broadband at this time should not suggest that we implicitly approve of any provider behavior that runs counter to general open Internet principles. Beyond those practices expressly prohibited by our rules, other conduct by mobile broadband providers, particularly conduct that would violate our rules for fixed broadband, may not necessarily be consistent with Internet openness and the public interest.

We are taking measured steps to protect openness for mobile broadband at this time in part because we want to better understand how the mobile broadband market is developing before determining whether adjustments to this framework are necessary. To that end, we will closely monitor developments in the mobile broadband market, with a particular focus on the following issues: (1) The effects of these rules, the C Block conditions, and market developments related to the openness of the Internet as accessed through mobile broadband; (2) any conduct by mobile broadband providers that harms innovation, investment, competition, end users, free expression or the achievement of national broadband goals; (3) the extent to which differences between fixed and mobile rules affect fixed and mobile broadband markets, including competition among fixed and mobile broadband providers; and (4) the extent to which differences between fixed and mobile rules affect end users for whom mobile broadband is their only or primary Internet access platform.[116] We will investigate and evaluate concerns as they arise. We also will adjust our rules as appropriate. To aid the Commission in these tasks, we will create an Open Internet Advisory Committee, as discussed below, with a mandate that includes monitoring and regularly reporting on the state of Internet openness for mobile broadband.

Further, we reaffirm our commitment to enforcing the open platform requirements applicable to upper 700 MHz C Block licensees. The first networks using this spectrum are now becoming operational.

[115] *See, e.g,* Free Press Comments at 125–26; OIC Comments at 36–39. *See also, e.g.,* Leap Comments at 17–22; Sprint Reply at 24–26. A number of commenters suggest that openness rules should be applied identically to all broadband platforms. *See, e.g.,* CenturyLink Comments at 22–23; Comcast Comments at 32; DISH Network PN Comments at 17; NCTA PN Comments at 11; Qwest PN Comments at 12–19; SureWest PN Comments at 18–20; TWC PN Comments at 33–35; Vonage PN Comments at 10–18; Windstream PN Comments at 6–19.

[116] We note that mobile broadband is the only or primary broadband Internet access platform used by many Americans.

*F. Other Laws and Considerations*

Open Internet rules are not intended to expand or contract broadband providers' rights or obligations with respect to other laws or safety and security considerations, including the needs of emergency communications and law enforcement, public safety, and national security authorities. Similarly, open Internet rules protect only *lawful* content, and are not intended to inhibit efforts by broadband providers to address unlawful transfers of content. For example, there should be no doubt that broadband providers can prioritize communications from emergency responders, or block transfers of child pornography. To make clear that open Internet protections can and must coexist with these other legal frameworks, we adopt the following clarifying provisions:

*Nothing in this part supersedes any obligation or authorization a provider of broadband Internet access service may have to address the needs of emergency communications or law enforcement, public safety, or national security authorities, consistent with or as permitted by applicable law, or limits the provider's ability to do so.*

*Nothing in this part prohibits reasonable efforts by a provider of broadband Internet access service to address copyright infringement or other unlawful activity.*

1. Emergency Communications and Safety and Security Authorities

Commenters are broadly supportive of our proposal to state that open Internet rules do not supersede any obligation a broadband provider may have—or limit its ability—to address the needs of emergency communications or law enforcement, public safety, or homeland or national security authorities (together, ''safety and security authorities''). Broadband providers have obligations under statutes such as the Communications Assistance for Law Enforcement Act, the Foreign Intelligence Surveillance Act, and the Electronic Communications Privacy Act that could in some circumstances intersect with open Internet protections, and most commenters recognize the benefits of clarifying that these obligations are not inconsistent with open Internet rules. Likewise, in connection with an emergency, there

may be Federal, state, Tribal, and local public safety entities; homeland security personnel; and other authorities that need guaranteed or prioritized access to the Internet in order to coordinate disaster relief and other emergency response efforts, or for other emergency communications. In the *Open Internet NPRM* we proposed to address the needs of law enforcement in one rule and the needs of emergency communications and public safety, national, and homeland security authorities in a separate rule. We are persuaded by the record that these rules should be combined, as the interests at issue are substantially similar.[117] We also agree that the rule should focus on the needs of ''law enforcement * * * authorities'' rather than the needs of ''law enforcement.'' The purpose of the safety and security provision is first to ensure that open Internet rules do not restrict broadband providers in addressing the needs of law enforcement authorities, and second to ensure that broadband providers do not use the safety and security provision without the imprimatur of a law enforcement authority, as a loophole to the rules. As such, application of the safety and security rule should be tied to invocation by relevant authorities rather than to a broadband provider's independent notion of law enforcement.

Some commenters urge us to limit the scope of the safety and security rule, or argue that it is unnecessary because other statutes give broadband providers the ability and responsibility to assist law enforcement. Several commenters urge the Commission to revise its proposal to clarify that broadband providers may not take any voluntary steps that would be inconsistent with open Internet principles, beyond those steps required by law. They argue, for example, that a broad exception for voluntary efforts could swallow open Internet rules by allowing broadband providers to cloak discriminatory practices under the guise of protecting safety and security.[118]

We agree with commenters that the safety and security rule should be tailored to avoid the possibility of broadband providers using their discretion to mask improper practices. But it would be a mistake to limit the rule to situations in which broadband providers have an obligation to assist safety and security personnel. For example, such a limitation would prevent broadband providers from implementing the Cellular Priority Access Service (also known as the Wireless Priority Service (WPS)), which allows for but does not legally require the prioritization of public safety communications on wireless networks. We do not think it necessary or advisable to provide for pre-deployment review by the Commission, particularly because time may be of the essence in meeting safety and security needs.[119]

2. Transfers of Unlawful Content and Unlawful Transfers of Content

In the *NPRM,* we proposed to treat as reasonable network management ''reasonable practices to * * * prevent the transfer of unlawful content; or * * * prevent the unlawful transfer of content.'' For reasons explained above we decline to include these practices within the scope of ''reasonable network management.'' However, we conclude that a clear statement that open Internet rules do not prohibit broadband providers from making reasonable efforts to address the transfer of unlawful content or unlawful transfers of content is helpful to ensure that open Internet rules are not used as a shield to enable unlawful activity or to deter prompt action against such activity. For example, open Internet rules should not be invoked to protect copyright infringement, which has adverse consequences for the economy, nor should they protect child pornography. We emphasize that open Internet rules do not alter copyright laws and are not intended to prohibit or discourage voluntary practices undertaken to address or mitigate the occurrence of copyright infringement.[120]

*G. Specialized Services*

In the *Open Internet NPRM,* the Commission recognized that broadband providers offer services that share capacity with broadband Internet access service over providers' last-mile facilities, and may develop and offer other such services in the future. These ''specialized services,'' such as some broadband providers' existing facilities-based VoIP and Internet Protocol-video offerings, differ from broadband Internet access service and may drive additional private investment in broadband networks and provide end users valued services, supplementing the benefits of the open Internet. At the same time, specialized services may raise concerns regarding bypassing open Internet protections, supplanting the open Internet, and enabling anticompetitive conduct. For example, open Internet protections may be weakened if broadband providers offer specialized services that are substantially similar to, but do not meet the definition of, broadband Internet access service, and if consumer protections do not apply to such services. In addition, broadband providers may constrict or fail to continue expanding network capacity allocated to broadband Internet access service to provide more capacity for specialized services. If this occurs, and particularly to the extent specialized services grow as substitutes for the delivery of content, applications, and services over broadband Internet access service, the Internet may wither as an open platform for competition, innovation, and free expression. These concerns may be exacerbated by consumers' limited choices for broadband providers, which may leave some end users unable to effectively exercise their preferences for broadband Internet access service (or content, applications, or services available through broadband Internet access service) over specialized services.

We agree with the many commenters who advocate that the Commission exercise its authority to closely monitor and proceed incrementally with respect to specialized services, rather than adopting policies specific to such services at this time. We will carefully observe market developments to verify that specialized services promote investment, innovation, competition, and end-user benefits without undermining or threatening the open Internet.[121] We note also that our rules

[117] *See* PIC Comments at 42–44. We intend the term ''national security authorities'' to include homeland security authorities.

[118] *See* EFF Comments at 20–22. EFF would require a pre-deployment waiver from the Commission if the needs of law enforcement would require broadband providers to act inconsistently with open Internet rules. *Id.* at 22.

[119] The National Emergency Number Association (NENA) would encourage or require network managers to provide public safety users with advance notice of changes in network management that could affect emergency services. *See* NENA Comments at 5–6. Although we do not adopt such a requirement, we encourage broadband providers to be mindful of the potential impact on emergency services when implementing network management policies, and to coordinate major changes with providers of emergency services when appropriate.

[120] *See, e.g.,* Stanford University—DMCA Complaint Resolution Center; User Generated Content Principles, *http://www.ugcprinciples.com* (cited in Letter from Linda Kinney, MPAA, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09–191, 10–137, WC Docket No. 07–52 at 1 (filed Nov. 29, 2010)). Open Internet rules are not intended to affect the legal status of cooperative efforts by broadband Internet access service providers and other service providers that are designed to curtail infringement in response to information provided by rights holders in a manner that is timely, effective, and accommodates the legitimate interests of providers, rights holders, and end users.

[121] Our decision not to adopt rules regarding specialized services at this time involves an issue distinct from the regulatory classification of services such as VoIP and IPTV under the

Continued

define broadband Internet access service to encompass ''any service that the Commission finds to be providing a functional equivalent of [broadband Internet access service], or that is used to evade the protections set forth in these rules.'' [122]

We will closely monitor the robustness and affordability of broadband Internet access services, with a particular focus on any signs that specialized services are in any way retarding the growth of or constricting capacity available for broadband Internet access service. We fully expect that broadband providers will increase capacity offered for broadband Internet access service if they expand network capacity to accommodate specialized services. We would be concerned if capacity for broadband Internet access service did not keep pace. We also expect broadband providers to disclose information about specialized services' impact, if any, on last-mile capacity available for, and the performance of, broadband Internet access service. We may consider additional disclosure requirements in this area in our related proceeding regarding consumer transparency and disclosure. We would also be concerned by any marketing, advertising, or other messaging by broadband providers suggesting that one or more specialized services, taken alone or together, and not provided in accordance with our open Internet rules, is ''Internet'' service or a substitute for broadband Internet access service. Finally, we will monitor the potential for anticompetitive or otherwise harmful effects from specialized services, including from any arrangements a broadband provider may seek to enter into with third parties to offer such services. The Open Internet Advisory Committee will aid us in monitoring these issues.

## IV. The Commission's Authority To Adopt Open Internet Rules

Congress created the Commission ''[f]or the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States * * * a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, [and] for the purpose of promoting safety of life and property through the use of wire and radio communication.'' Section 2 of the Communications Act grants the Commission jurisdiction over ''all interstate and foreign communication by wire or radio.'' As the Supreme Court explained in the radio context, Congress charged the Commission with ''regulating a field of enterprise the dominant characteristic of which was the rapid pace of its unfolding'' and therefore intended to give the Commission sufficiently ''broad'' authority to address new issues that arise with respect to ''fluid and dynamic'' communications technologies.[123] Broadband Internet access services are clearly within the Commission's subject matter jurisdiction and historically have been supervised by the Commission. Furthermore, as explained below, our adoption of basic rules of the road for broadband providers implements specific statutory mandates in the Communications Act and the Telecommunications Act of 1996.

Congress has demonstrated its awareness of the importance of the Internet and advanced services to modern interstate communications. In Section 230 of the Act, for example, Congress announced ''the policy of the United States'' concerning the Internet, which includes ''promot[ing] the continued development of the Internet'' and ''encourag[ing] the development of technologies which maximize user control over what information is received by individuals, families, and schools who use the Internet,'' while also ''preserv[ing] the vibrant and competitive free market that presently exists for the Internet and other interactive computer services'' and avoiding unnecessary regulation. Other statements of congressional policy further confirm the Commission's statutory authority. In Section 254 of the Act, for example, Congress charged the Commission with designing a Federal universal program that has as one of several objectives making ''[a]ccess to advanced telecommunications and information services'' available ''in all regions of the Nation,'' and particularly to schools, libraries, and health care providers. To the same end, in Section 706 of the 1996 Act, Congress instructed the Commission to ''encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms)'' and, if it finds that advanced telecommunications capability is not being deployed to all Americans ''on a reasonable and timely basis,'' to ''take immediate action to accelerate deployment of such capability.'' This mandate provides the Commission both ''authority'' and ''discretion'' ''to settle on the best regulatory or deregulatory approach to broadband.'' As the legislative history of the 1996 Act confirms, Congress believed that the laws it drafted would compel the Commission to protect and promote the Internet, while allowing the agency sufficient flexibility to decide how to do so.[124] As explained in detail below, Congress did not limit its instructions to the Commission to one Section of the communications laws. Rather, it expressed its instructions in multiple Sections which, viewed as a whole, provide broad authority to promote competition, investment, transparency, and an open Internet through the rules we adopt in this Order.

### *A. Section 706 of the 1996 Act Provides Authority for the Open Internet Rules*

As noted, Section 706 of the 1996 Act directs the Commission (along with state commissions) to take actions that encourage the deployment of ''advanced telecommunications capability.'' ''[A]dvanced telecommunications capability,'' as defined in the statute, includes broadband Internet access.[125]

Communications Act, a subject we do not address in this Order. Likewise, the Commission's actions here do not affect any existing obligation to provide interconnection, unbundled network elements, or special access or other wholesale access under Sections 201, 251, 256, and 271 of the Act. 47 U.S.C. 201, 251, 256, 271.

[122] Some commenters, including Internet engineering experts and analysts, emphasize the importance of distinguishing between the open Internet and specialized services and state that ''this distinction must continue as a most appropriate and constructive basis for pursuing your policy goals.'' Various Advocates for the Open Internet PN Reply at 3; *see also id.* at 2.

[123] *Nat'l Broad. Co., Inc.* v. *United States,* 319 U.S. 190, 219–20 (1943) (Congress did not ''attempt[] an itemized catalogue of the specific manifestations of the general problems'' that it entrusted to the Commission); *see also FCC* v. *Pottsville Broad. Co.,* 309 U.S. 134, 137, 138 (1940) (the Commission's statutory responsibilities and authority amount to ''a unified and comprehensive regulatory system'' for the communications industry that allows a single agency to ''maintain, through appropriate administrative control, a grip on the dynamic aspects'' of that ever-changing industry).

[124] S. Rep. No. 104–23, at 51 (1995) (''The goal is to accelerate deployment of an advanced capability that will enable subscribers in all parts of the United States to send and receive information in all its forms—voice, data, graphics, and video—over a high-speed switched, interactive, broadband, transmission capability.'').

[125] 47 U.S.C. 1302(d)(1) (defining ''advanced telecommunications capability'' as ''high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology''). *See National Broadband Plan for our Future,* Notice of Inquiry, 24 FCC Rcd 4342, 4309, App. para. 13 (2009) (''advanced telecommunications capability'' includes broadband Internet access); *Inquiry Concerning the Deployment of Advanced Telecomms. Capability to All Americans in a*

Under Section 706(a), the Commission must encourage the deployment of such capability by ''utilizing, in a manner consistent with the public interest, convenience, and necessity,'' various tools including ''measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.'' For the reasons stated in Parts II.A, II.D and III.B, above, our open Internet rules will have precisely that effect.

In *Comcast,* the DC Circuit identified Section 706(a) as a provision that ''at least arguably * * * delegate[s] regulatory authority to the Commission,'' and in fact ''contain[s] a direct mandate—the Commission 'shall encourage.' '' [126] The court, however, regarded the Commission as ''bound by'' a prior order that, in the court of appeals' understanding, had held that Section 706(a) is not a grant of authority. In the *Advanced Services Order,* to which the court referred, the Commission held that Section 706(a) did not permit it to encourage advanced services deployment through the mechanism of forbearance without complying with the specific requirements for forbearance set forth in Section 10 of the Communications Act. The issue presented in the 1998 proceeding was whether the Commission could rely on the broad terms of Section 706(a) to trump those specific requirements. In the *Advanced Services Order,* the Commission ruled that it could not do so, noting that it would be ''unreasonable'' to conclude that Congress intended Section 706(a) to ''allow the Commission to eviscerate [specified] forbearance exclusions after having expressly singled out [those exclusions] for different treatment in Section 10.'' The Commission accordingly concluded that Section 706(a) did not give it independent authority—in other words, authority over and above what it otherwise possessed [127]—to forbear from applying other provisions of the Act. The Commission's holding thus honored the interpretive canon that ''[a] specific provision * * * controls one[ ] of more general application.''

While disavowing a reading of Section 706(a) that would allow the agency to trump specific mandates of the Communications Act, the Commission nonetheless affirmed in the *Advanced Services Order* that Section 706(a) ''gives this Commission an affirmative obligation to encourage the deployment of advanced services'' using its existing rulemaking, forbearance and adjudicatory powers, and stressed that ''this obligation has substance.'' The *Advanced Services Order* is, therefore, consistent with our present understanding that Section 706(a) authorizes the Commission (along with state commissions) to take actions, within their subject matter jurisdiction and not inconsistent with other provisions of law, that encourage the deployment of advanced telecommunications capability by any of the means listed in the provision.[128]

In directing the Commission to ''encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans * * * by utilizing * * * price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment,'' Congress necessarily invested the Commission with the statutory authority to carry out those acts. Indeed, the relevant Senate Report explained that the provisions of Section 706 are ''intended to ensure that one of the primary objectives of the [1996 Act]—to accelerate deployment of advanced telecommunications capability—is achieved,'' and stressed that these provisions are ''a necessary fail-safe'' to guarantee that Congress's objective is reached. It would be odd indeed to characterize Section 706(a) as a ''fail-safe'' that ''ensures'' the Commission's ability to promote advanced services if it conferred no actual authority. Here, under our reading, Section 706(a) authorizes the Commission to address practices, such as blocking VoIP communications, degrading or raising the cost of online video, or denying end users material information about their broadband service, that have the potential to stifle overall investment in Internet infrastructure and limit competition in telecommunications markets.

This reading of Section 706(a) obviates the concern of some commenters that our jurisdiction under the provision could be ''limitless'' or ''unbounded.'' To the contrary, our Section 706(a) authority is limited in three critical respects. First, our mandate under Section 706(a) must be read consistently with Sections 1 and 2 of the Act, which define the Commission's subject matter jurisdiction over ''interstate and foreign commerce in communication by wire and radio.'' [129] As a result, our authority under Section 706(a) does not, in our view, extend beyond our subject matter jurisdiction under the Communications Act. Second, the Commission's actions

*Reasonable and Timely Fashion,* 14 FCC Rcd 2398, 2400, para. 1 (Section 706 addresses ''the deployment of broadband capability''), 2406 para. 20 (same). Even when broadband Internet access is provided as an ''information service'' rather than a ''telecommunications service,'' *see Nat'l Cable & Telecomm. Ass'n* v. *Brand X Internet Servs.,* 545 U.S. 967, 977–78 (2005), it involves ''telecommunications.'' 47 U.S.C. 153(24). Given Section 706's explicit focus on deployment of broadband access to voice, data, and video communications, it is not important that the statute does not use the exact phrase ''Internet network management.''

[126] *See Comcast,* 600 F.3d at 658; *see also* 47 U.S.C. 1302(a) (''The Commission * * * shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans * * * by utilizing * * * price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.''). Because Section 706 contains a ''direct mandate,'' we reject the argument pressed by some commenters (*see, e.g.,* AT&T Comments at 217–18; Verizon Comments at 100–01; Qwest Comments at 58–59; Letter from Rick Chessen, Senior Vice President, Law and Regulatory Policy, NCTA, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09–191 & 10–127, WC Docket No. 07–52, at 7 (filed Dec. 10, 2010) (NCTA Dec. 10, 2010 *Ex Parte* Letter)) that Section 706 confers no substantive authority.

[127] Consistent with longstanding Supreme Court precedent, we have understood this authority to include our ancillary jurisdiction to further congressional policy. *See, e.g., Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry),* Final Decision, 77 FCC 2d 384, 474 (1980), *aff'd, Computer & Commc'ns Indus. Ass'n.* v. *FCC,* 693 F.2d 198, 211–14 (DC Cir. 1982) (*CCIA*).

[128] To the extent the *Advanced Services Order* can be construed as having read Section 706(a) differently, we reject that reading of the statute for the reasons discussed in the text.

[129] 47 U.S.C. 151, 152. The Commission historically has recognized that services carrying Internet traffic are jurisdictionally mixed, but generally subject to Federal regulation. *See, e.g., Nat'l Ass'n of Regulatory Util. Comm'rs Petition for Clarification or Declaratory Ruling that No FCC Order or Rule Limits State Authority to Collect Broadband Data,* Memorandum Opinion and Order, 25 FCC Rcd 5051, 5054, paras. 8–9 & n. 24 (2010). Where, as here, ''it is not possible to separate the interstate and intrastate aspects of the service,'' the Commission may preempt state regulation where ''Federal regulation is necessary to further a valid Federal regulatory objective, *i.e.,* state regulation would conflict with Federal regulatory policies.'' *Minn. Pub. Utils. Comm'n* v. *FCC,* 483 F.3d 570, 578 (8th Cir. 2007); *see also La. Pub. Serv. Comm'n* v. *FCC,* 476 U.S. 355, 375 n. 4 (1986). Except to the extent a state requirement conflicts on its face with a Commission decision herein, the Commission will evaluate preemption in light of the fact-specific nature of the relevant inquiry, on a case-by-case basis. We recognize, for example, that states play a vital role in protecting end users from fraud, enforcing fair business practices, and responding to consumer inquiries and complaints. *See, e.g., Vonage Order,* 19 FCC Rcd at 22404–05, para. 1. We have no intention of impairing states' or local governments' ability to carry out these duties unless we find that specific measures conflict with Federal law or policy. In determining whether state or local regulations frustrate Federal policies, we will, among other things, be guided by the overarching congressional policies described in Section 230 of the Act and Section 706 of the 1996 Act. 47 U.S.C. 230, 1302.

under Section 706(a) must ''encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.'' Third, the activity undertaken to encourage such deployment must ''utilize[e], in a manner consistent with the public interest, convenience, and necessity,'' one (or more) of various specified methods. These include: ''price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.'' Actions that do not fall within those categories are not authorized by Section 706(a). Thus, as the DC Circuit has noted, while the statutory authority granted by Section 706(a) is broad, it is ''not unfettered.'' [130]

Section 706(a) accordingly provides the Commission a specific delegation of legislative authority to promote the deployment of advanced services, including by means of the open Internet rules adopted in this Order. Our understanding of Section 706(a) is, moreover, harmonious with other statutory provisions that confer a broad mandate on the Commission. Section 706(a)'s directive to ''encourage the deployment [of advanced telecommunications capability] on a reasonable and timely basis'' using the methods specified in the statute is, for example, no broader than other provisions of the Commission's authorizing statutes that command the agency to ensure ''just'' and ''reasonable'' rates and practices, or to regulate services in the ''public interest.'' Indeed, our authority under Section 706(a) is generally consistent with—albeit narrower than—the understanding of ancillary jurisdiction under which this Commission operated for decades before the *Comcast* decision.[131] The similarities between the two in fact explain why the Commission has not heretofore had occasion to describe Section 706(a) in this way: In the particular proceedings prior to *Comcast,* setting out the understanding of Section 706(a) that we articulate in this Order would not meaningfully have increased the authority that we understood the Commission already to possess.[132]

Section 706(b) of the 1996 Act provides additional authority to take actions such as enforcing open Internet principles. It directs the Commission to undertake annual inquiries concerning the availability of advanced telecommunications capability to all Americans and requires that, if the Commission finds that such capability is not being deployed in a reasonable and timely fashion, it ''*shall take immediate action* to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.'' In July 2010, the Commission ''conclude[d] that broadband deployment to *all* Americans is not reasonable and timely'' and noted that ''[a]s a consequence of that conclusion,'' Section 706(b) was triggered. Section 706(b) therefore provides express authority for the pro-investment, pro-competition rules we adopt in this Order.

### *B. Authority To Promote Competition and Investment in, and Protect End Users of, Voice, Video, and Audio Services*

The Commission also has authority under the Communications Act to adopt the open Internet rules in order to promote competition and investment in voice, video, and audio services. Furthermore, for the reasons stated in Part II, above, even if statutory provisions related to voice, video, and audio communications were the *only* sources of authority for the open Internet rules (which is not the case), it would not be sound policy to attempt to implement rules concerning only voice, video, or audio transmissions over the Internet.[133]

#### 1. The Commission Has Authority To Adopt Open Internet Rules To Further Its Responsibilities Under Title II of the Act

Section 201 of the Act delegates to the Commission ''express and expansive authority'' to ensure that the ''charges [and] practices * * * in connection with'' telecommunications services are ''just and reasonable.'' As described in Part II.B, interconnected VoIP services, which include some over-the-top VoIP services, ''are increasingly being used as a substitute for traditional telephone service.''[134] Over-the-top services therefore do, or will, contribute to the marketplace discipline of voice telecommunications services regulated under Section 201.[135] Furthermore,

[130] *Ad Hoc Telecomms. Users Comm.,* 572 F.3d at 906–07 (''The general and generous phrasing of sec. 706 means that the FCC possesses significant albeit not unfettered, authority and discretion to settle on the best regulatory or deregulatory approach to broadband.'').

[131] In *Comcast,* the court stated that '' '[t]he Commission * * * may exercise ancillary jurisdiction only when two conditions are satisfied: (1) The Commission's general jurisdictional grant under Title I [of the Communications Act] covers the regulated subject and (2) the regulations are reasonably ancillary to the Commission's effective performance of its statutorily mandated responsibilities.' '' 600 F.3d at 646 (quoting *Am. Library Ass'n* v. *FCC,* 406 F.3d 689, 691–92 (DC Cir. 2005)) (alterations in original). The court further ruled that the second prong of this test requires the Commission to rely on specific delegations of statutory authority. 600 F.3d at 644, 654.

[132] Ignoring that Section 706(a) expressly contemplates the use of ''regulating methods'' such as price regulation, some commenters read prior Commission orders as suggesting that Section 706 authorizes only deregulatory actions. *See* AT&T Comments at 216 (citing *Petition for Declaratory Ruling that pulver.com's Free World Dialup is Neither Telecomm. Nor A Telecomms. Serv.,* Memorandum Opinion and Order, 19 FCC Rcd 3307, 3319, para. 19 n. 69 (2004) (*Pulver Order*)); Esbin Comments at 52 (citing *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities et al.,* Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798, 4801, 4826, 4840, paras. 4, 47, 73, (2002) (*Cable Modem Declaratory Ruling*) and *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities et al.,* Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853, 14894 para. 77 (2005) (*Wireline Broadband Report and Order*)). They are mistaken. The *Pulver Order* stated only that Section 706 did not contemplate the application of ''economic and entry/exit regulation *inherent in Title II''* to information service Internet applications. *Pulver Order,* 19 FCC Rcd at 3379, para. 19 n. 69 (emphasis added). The open Internet rules that we adopt in this Order do not regulate Internet applications, much less impose Title II (*i.e.,* common carrier) regulation on such applications. Moreover, at the same time the Commission determined in the *Cable Modem Declaratory Ruling* and the *Wireline Broadband Report and Order* that cable modem service and wireline broadband services (such as DSL) could be provided as information services not subject to Title II, it proposed new regulations under other sources of authority including Section 706. *See Cable Modem Declaratory Ruling,* 17 FCC Rcd at 4840, para. 73; *Wireline Broadband Report and Order,* 20 FCC Rcd at 14929–30, 14987, para. 146. On the same day the Commission adopted the *Wireline Broadband Report and Order,* it also adopted the *Internet Policy Statement,* which rested in part on Section 706. 20 FCC Rcd 14986, para. 2 (2005). Our prior orders therefore do not construe Section 706 as exclusively deregulatory. And to the extent that any prior order does suggest such a construction, we now reject it. *See Ad Hoc Telecomms. Users Comm.,* 572 F.3d at 908 (Section 706 ''direct[s] the FCC to make the major policy decisions and to select *the mix of regulatory and deregulatory tools* the Commission deems most appropriate in the public interest to facilitate broadband deployment and competition'') (emphasis added).

[133] Many broadband providers offer their service on a common carriage basis under Title II of the Act. *See Framework for Broadband Internet Serv.,* Notice of Inquiry, 25 FCC Rcd 7866, 7875, para. 21 (2010). With respect to these providers, the rules we adopt in this Order are additionally supported on that basis. With the possible exception of transparency requirements, however, the open Internet rules are unlikely to create substantial new duties for these providers in practice.

[134] *Tel. No. Requirements for IP–Enabled Servs. Providers,* Report and Order, Declaratory Ruling, Order on Remand, and NPRM, 22 FCC Rcd 19531, 19547, para. 28 (2007). By definition, interconnected VoIP services allow calls to and from traditional phone networks.

[135] *See* NCTA Dec. 10, 2010 *Ex Parte* Letter (arguing that the Commission could exercise authority ancillary to several provisions of Title II of the Act, including Sections 201 and 202, ''to ensure that common carrier services continue to be

companies that provide both voice communications and broadband Internet access services (for example, telephone companies that are broadband providers) have the incentive and ability to block, degrade, or otherwise disadvantage the services of their online voice competitors. Because the Commission may enlist market forces to fulfill its Section 201 responsibilities, we possess authority to prevent these anticompetitive practices through open Internet rules.[136]

Section 251(a)(1) of the Act imposes a duty on all telecommunications carriers ''to interconnect directly or indirectly with the facilities of other telecommunications carriers.'' Many over-the-top VoIP services allow end users to receive calls from and/or place calls to traditional phone networks operated by telecommunications carriers. The Commission has not determined whether any such VoIP providers are telecommunications carriers. To the extent that VoIP services are information services (rather than telecommunications services), any blocking or degrading of a call from a traditional telephone customer to a customer of a VoIP provider, or vice-versa, would deny the traditional telephone customer the intended benefits of telecommunications interconnection under Section 251(a)(1). Over-the-top VoIP customers account for a growing share of telephone usage. If calls to and from these VoIP customers were not delivered efficiently and reliably by broadband providers, all users of the public switched telephone network would be limited in their ability to communicate, and Congress's goal of ''efficient, Nation-wide, and world-wide'' communications across interconnected networks would be frustrated. To the extent that VoIP services are telecommunications services, a broadband provider's interference with traffic exchanged between a provider of VoIP telecommunications services and another telecommunications carrier would interfere with interconnection between two telecommunications carriers under Section 251(a)(1).[137]

2. The Commission Has Authority To Adopt Open Internet Rules To Further Its Responsibilities Under Titles III and VI of the Act

''The Commission has been charged with broad responsibilities for the orderly development of an appropriate system of local television broadcasting,'' [138] which arise from the Commission's more general public interest obligation to ''ensure the larger and more effective use of radio.'' [139] Similarly, the Commission has broad jurisdiction to oversee MVPD services, including direct-broadcast satellite (DBS).[140] Consistent with these mandates, our jurisdiction over video and audio services under Titles III and VI of the Communications Act provides additional authority for open Internet rules.

First, such rules are necessary to the effective performance of our Title III responsibilities to ensure the ''orderly development * * * of local television broadcasting'' [141] and the ''more effective use of radio.'' [142] As discussed in Parts II.A and II.B, Internet video distribution is increasingly important to all video programming services, including local television broadcast service. Radio stations also are providing audio and video content on the Internet. At the same time,

offered on just and reasonable terms and conditions'' and to ''facilitate consumer access to broadband-based alternatives to common carrier services such as Voice over Internet Protocol''); Vonage Comments at 11–12 (''The Commission's proposed regulations would help preserve the competitive balance between providers electing to operate under Title II and those operating under Title I.''); Google Comments at 45–46 (''The widespread use of VoIP and related services as cheaper and more feature-rich alternatives to Title II services has significant effects on traditional telephone providers' practices and pricing, as well [as] on network interconnection between Title II and IP networks that consumers use to reach each other, going to the heart of the Commission's Title II responsibilities.'') (footnotes and citations omitted); Letter from Devendra T. Kumar, Counsel to Skype Communications S.A.R.L., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09–191, WC Docket No. 07–52 (filed Nov. 30, 2010) (arguing that the Commission has authority ancillary to Section 201 to protect international VoIP calling); XO Comments at 20 (noting the impact of, *inter alia,* VoIP on the Commission's ''traditional framework'' for regulating voice services under Title II); Letter from Alan Inouye *et al.,* on behalf of ALA, ARL and EDUCAUSE, to Chairman Julius Genachowski *et al.,* GN Docket No. 09–191, WC Docket No. 07–52 at 4–5 (filed Dec. 13, 2010) (citing examples of how libraries and higher education institutions are using broadband services, including VoIP, to replace traditional common carrier services). In previous orders, the Commission has embraced the use of VoIP to avoid or constrain high international calling rates. *See Universal Serv. Contribution Methodology et al.,* Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518, 7546, para. 55 & n.187 (2006) (''[I]nterconnected VoIP service is often marketed as an economical way to make interstate and international calls, as a lower-cost substitute for wireline toll service.''), *rev'd in part sub nom. Vonage Holdings Corp.* v. *FCC,* 489 F.3d 1232 (DC Cir. 2007); *Reporting Requirements for U.S. Providers of Int'l Telecomms. Servs.,* Notice of Proposed Rulemaking, 19 FCC Rcd 6460, 6470, para. 22 (2004) (''Improvements in the packet-switched transmission technology underlying the Internet now allow providers of VoIP to offer international voice transmission of reasonable quality at a price lower than current IMTS rates.'') (footnote omitted); *Int'l Settlements Policy Reform,* Notice of Proposed Rulemaking, 17 FCC Rcd 19954, 19964, para. 13 (2002) (''This ability to engage in least-cost routing, as well as alternative, non-traditional services such as IP Telephony or Voice-Over-IP, in conjunction with the benchmarks policy have created a market dynamic that is pressuring international settlement rates downward.''). In addition, NCTA has explained that, ''[b]y enabling consumers to make informed choices regarding broadband Internet access service,'' the Commission could conclude that transparency requirements ''would help promote the competitiveness of VoIP and other broadband-based communications services'' and ''thereby facilitate the operation of market forces to discipline the charges and other practices of common carriers, in fulfillment of the Commission's obligations under Sections 201 and 202'' of the Act. NCTA Dec. 10, 2010 *Ex Parte* Letter at 2–3.

[136] We reject the argument asserted by some commenters (*see, e.g.,* AT&T Comments at 218–19; Verizon Comments at 98–99) that the various grants of rulemaking authority in the Act, including the express grant of rulemaking authority in Section 201(b) itself, do not authorize the promulgation of rules pursuant to Section 201(b). *See AT&T Corp.* v. *Iowa Utils. Bd.,* 525 U.S. 366, 378 (1999) (''We think that the grant in sec. 201(b) means what it says: The FCC has rulemaking authority to carry out the 'provisions of this Act.' '').

[137] *See also* 47 U.S.C. 256(b)(1) (directing the Commission to ''establish procedures for * * * oversight of coordinated network planning by telecommunications carriers and other providers of telecommunications service for the effective and efficient interconnection of public telecommunications networks used to provide telecommunications service''); *Comcast,* 600 F.3d at 659 (acknowledging Section 256's objective, while adding that Section 256 does not '' 'expand[ ] * * * any authority that the Commission' otherwise has under law'') (quoting 47 U.S.C. 256(c)).

[138] *See United States* v. *Sw. Cable Co.,* 392 U.S. 157, 177 (1968); *see also id.* at 174 (''[T]hese obligations require for their satisfaction the creation of a system of local broadcasting stations, such that 'all communities of appreciable size (will) have at least one television station as an outlet for local self-expression.' ''); 47 U.S.C. 307(b) (Commission shall ''make such distribution of licenses, * * * among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same''), 303(f) & (h) (authorizing the Commission to allocate broadcasting zones or areas and to promulgate regulations ''as it may deem necessary'' to prevent interference among stations) (cited in *Sw. Cable,* 392 U.S. at 173–74).

[139] *Nat'l Broad. Co.,* 319 U.S. at 216 (public interest to be served is the ''larger and more effective use of radio'') (citation and internal quotation marks omitted).

[140] *See* 47 U.S.C. 303(v); *see also N.Y. State Comm'n on Cable Television* v. *FCC,* 749 F.2d 804, 807–12 (DC Cir. 1984) (upholding the Commission's exercise of ancillary authority over satellite master antenna television service); 47 U.S.C. 548 (discussed below).

[141] *Sw. Cable,* 392 U.S. at 177; *see* 47 U.S.C. 303(f) & (h) (establishing Commission's authority to allocate broadcasting zones or areas and to promulgate regulations ''as it may deem necessary'' to prevent interference among stations) (cited in *Sw. Cable,* 392 U.S. at 173–74).

[142] *Nat'l Broad. Co.,* 319 U.S. at 216; *see also* 47 U.S.C. 303(g) (establishing Commission's duty to ''generally encourage the larger and more effective use of radio in the public interest''), 307(b) (''[T]he Commission shall make such distribution of licenses * * * among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.'').

broadband providers—many of which are also MVPDs—have the incentive and ability to engage in self-interested practices that may include blocking or degrading the quality of online programming content, including broadcast content, or charging unreasonable additional fees for faster delivery of such content. Absent the rules we adopt in this Order, such practices jeopardize broadcasters' ability to offer news (including local news) and other programming over the Internet, and, in turn, threaten to impair their ability to offer high-quality broadcast content.[143]

The Commission likewise has authority under Title VI of the Act to adopt open Internet rules that protect competition in the provision of MVPD services. A cable or telephone company's interference with the online transmission of programming by DBS operators or stand-alone online video programming aggregators that may function as competitive alternatives to traditional MVPDs[144] would frustrate Congress's stated goals in enacting Section 628 of the Act, which include promoting ''competition and diversity in the multichannel video programming market''; ''increase[ing] the availability of satellite cable programming and satellite broadcast programming to persons in rural and other areas not currently able to receive such programming''; and ''spur[ring] the development of communications technologies.''[145]

When Congress enacted Section 628 in 1992, it was specifically concerned about the incentive and ability of cable operators to use their control of video programming to impede competition from the then-nascent DBS industry.[146] Since that time, the Internet has opened a new competitive arena in which MVPDs that offer broadband service have the opportunity and incentive to impede DBS providers and other competing MVPDs—and the statute reaches this analogous arena as well. Section 628(b) prohibits cable operators from engaging in ''unfair or deceptive acts or practices the purpose or effect of which is to prevent or hinder significantly the ability of an MVPD to deliver satellite cable programming or satellite broadcast programming to consumers.'' An ''unfair method of competition or unfair act or practice'' under Section 628(b) includes acts that can be anticompetitive.[147] Thus, Section 628(b) proscribes practices by cable operators that (i) can impede competition, and (ii) have the purpose or effect of preventing or significantly hindering other MVPDs from providing consumers their satellite-delivered programming (*i.e.,* programming transmitted to MVPDs via satellite for retransmission to subscribers).[148] Section 628(c)(1), in turn, directs the Commission to adopt rules proscribing unfair practices by cable operators and their affiliated satellite cable programming vendors. Section 628(j) provides that telephone companies offering video programming services are subject to the same rules as cable operators.

The open Internet rules directly further our mandate under Section 628. Cable operators, telephone companies, and DBS operators alike are seeking to keep and win customers by expanding their MVPD offerings to include online access to their programming.[149] For example, in providing its MVPD service, DISH (one of the nation's two DBS providers) relies significantly on online dissemination of programming, including video-on-demand and other programming, that competes with similar offerings by cable operators.[150]

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[143] NCTA has noted that ''[t]he Commission could decide that, based on the growing importance of broadcast programming distributed over broadband networks to both television viewers and the business of broadcasting itself, ensuring that broadcast video content made available over broadband networks is not subject to unreasonable discrimination or anticompetitive treatment is necessary to preserve and strengthen the system of local broadcasting.'' NCTA Dec. 10, 2010 *Ex Parte* Letter at 3; *see also id.* (''Facilitating the availability of broadcast content on the Internet may also help to foster more efficient and intensive use of spectrum, thereby supporting the Commission's duty in Section 303(g) to 'generally encourage the larger and more effective use of radio in the public interest.' '') (quoting 47 U.S.C. 303(g)).

[144] The issue whether online-only video programming aggregators are themselves MVPDs under the Communications Act and our regulations has been raised in pending program access complaint proceedings. *See, e.g., VDC Corp.* v. *Turner Network Sales, Inc.,* Program Access Complaint (Jan. 18, 2007); *Sky Angel U.S., LLC* v. *Discovery Commc'ns LLC,* Program Access Complaint (Mar. 24, 2010). Nothing in this Order should be read to state or imply any determination on this issue.

[145] 47 U.S.C. sec. 548(a). The Act defines ''video programming'' as ''programming provided by, or generally considered comparable to programming provided by, a television broadcast station.'' 47 U.S.C. sec. 522(20). Although the Commission stated nearly a decade ago that video '' 'streamed' over the Internet'' had ''not yet achieved television quality'' and therefore did not constitute ''video programming'' at that time, *see Cable Modem Declaratory Ruling,* 17 FCC Rcd at 4834, para. 63 n.236, intervening improvements in streaming technology and broadband availability enable such programming to be ''comparable to programming provided by * * * a television broadcast station,'' 47 U.S.C. sec. 522(20). This finding is consistent with our prediction more than five years ago that ''[a]s video compression technology improves, data transfer rates increase, and media adapters that link TV to a broadband connection become more widely used, * * * video over the Internet will proliferate and improve in quality.'' *Ann. Assessment of the Status of Competition in the Mkt. for the Delivery of Video Programming,* Notice of Inquiry, 19 FCC Rcd 10909, 10932, para. 74 (2004) (citation omitted).

[146] *See* Cable Act of 1992, Public Law 102–385, sec. 2(a)(5), 106 Stat. 1460, 1461 (''Vertically integrated program suppliers * * * have the incentive and ability to favor their affiliated cable operators over nonaffiliated cable operators and programming distributors using other technologies.''); H.R. Rep. No. 102–862, at 93 (1992) (Conf. Rep.), *reprinted in* 1992 U.S.C.C.A.N. 1231, 1275 (''In adopting rules under this section, the conferees expect the Commission to address and resolve the problems of unreasonable cable industry practices, including restricting the availability of programming and charging discriminatory prices to non-cable technologies.''); S. Rep. No. 102–92, at 26 (1991), *reprinted in* 1992 U.S.C.C.A.N. 1133, 1159 (''[C]able programmers may simply refuse to sell to potential competitors. Small cable operators, satellite dish owners, and wireless cable operators complain that they are denied access to, or charged more for, programming than large, vertically integrated cable operators.'').

[147] *Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements,* First Report and Order, 25 FCC Rcd 746, 779, para. 48 & n. 190 (2010) (citing *Exclusive Contracts for Provision of Video Serv. in Multiple Dwelling Units and Other Real Estate Devs.,* Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 20235, 20255, para. 43, *aff'd, NCTA,* 567 F.3d 659); *see also NTCA,* 567 F.3d at 664–65 (referring to ''unfair dealing'' and ''anticompetitive practices'').

[148] *See* 47 U.S.C. 548(b); *NCTA,* 567 F.3d at 664. In *NCTA,* the court held that the Commission reasonably concluded that the ''broad and sweeping terms'' of Section 628(b) authorized it to ban exclusive agreements between cable operators and building owners that prevented other MVPDs from providing their programming to residents of those buildings. The court observed that ''the words Congress chose [in Section 628(b)] focus not on practices that prevent MVPDs from *obtaining* satellite cable or satellite broadcast programming, but on practices that prevent them from 'providing' that programming 'to subscribers or consumers.' '' *NCTA,* 567 F.3d at 664 (emphasis in original).

[149] DISH Reply at 4–5 (''Pay-TV services continue to evolve at a rapid pace and providers increasingly are integrating their vast offerings of linear channels with online content,'' while ''consumers are adopting online video services as a complement to traditional, linear pay-TV services'' and ''specifically desire Internet video as a complement to * * * [MVPDs'] traditional TV offerings.'') (footnotes and citations omitted). We find unpersuasive the contention that this Order fails to ''grapple with the implications of the market forces that are driving MVPDs * * * to add Internet connectivity to their multichannel video offerings.'' McDowell Statement at *24 (footnote omitted). Our analysis takes account of these developments, which are discussed at length in Part II.A, above.

[150] *Id.* at 5–8 & n. 20 (discussing ''DishOnline service,'' which ''allows DISH to offer over 3,000 movies and TV shows through its 'DishOnline' Internet video service,'' and noting that ''the success of DishOnline is critically dependent on broadband access provided and controlled by DISH's competitors in the MVPD market''); DISH PN Comments at 2–3; DISH Network, Watch Live TV Online OR Recorded Programs with DishOnline, *http://www.dish-systems.com/products/dish_online.php* (' 'DISHOnline.com integrates DISH Network's expansive TV programming lineup with the vast amount of online video content, adding another dimension to our 'pay once, take your TV everywhere' product platform.' '). Much of the regular subscription programming that DISH offers online is satellite-delivered programming. *See* DISH Network, Watch Live TV Online OR Recorded

As DISH explains, ''[a]s more and more video consumption moves online, the competitive viability of stand-alone MVPDs depends on their ability to offer an online video experience of the same quality as the online video offerings of integrated broadband providers.'' The open Internet rules will prevent practices by cable operators and telephone companies, in their role as broadband providers, that have the purpose or effect of significantly hindering (or altogether preventing) delivery of video programming protected under Section 628(b).[151] The Commission therefore is authorized to adopt open Internet rules under Section 628(b), (c)(1), and (j).[152]

Similarly, open Internet rules enable us to carry out our responsibilities under Section 616(a) of the Act, which confers additional express statutory authority to combat discriminatory network management practices by broadband providers. Section 616(a) directs the Commission to adopt regulations governing program carriage agreements ''and related practices'' between cable operators or other MVPDs and video programming vendors.[153] The program carriage regulations must include provisions that prevent MVPDs from ''unreasonably restrain[ing] the ability of an unaffiliated video programming vendor to compete fairly by discriminating in video programming distribution,'' on the basis of a vendor's affiliation or lack of affiliation with the MVPD, in the selection, terms, or conditions of carriage of the vendor's programming.[154] MVPD practices that discriminatorily impede competing video programming vendors' online delivery of programming to consumers affect the vendors' ability to ''compete fairly'' for viewers, just as surely as MVPDs' discriminatory selection of video programming for carriage on cable systems has this effect. We find that discriminatory practices by MVPDs in their capacity as broadband providers, such as blocking or charging fees for termination of online video programming to end users, are ''related'' to program carriage agreements and within our mandate to adopt regulations under Section 616(a).[155]

### *C. Authority To Protect the Public Interest Through Spectrum Licensing*

Open Internet rules for wireless services are further supported by our authority, under Title III of the Communications Act, to protect the public interest through spectrum licensing. Congress has entrusted the Commission with ''maintain[ing] the control of the United States over all the channels of radio transmission.'' Licensees hold Commission-granted authorizations to use that spectrum subject to conditions the Commission imposes on that use.[156] In considering whether to grant a license to use spectrum, therefore, the Commission must ''determine * * * whether the public interest, convenience, and necessity will be served by the granting of such application.'' [157] Likewise, when identifying classes of licenses to be awarded by auction and the characteristics of those licenses, the Commission ''shall include safeguards to protect the public interest'' and must seek to promote a number of goals, including ''the development and rapid deployment of new technologies, products, and services.'' Even after licenses are awarded, the Commission may change the license terms ''if in the judgment of the Commission such action will promote the public interest, convenience, and necessity.'' The Commission may exercise this authority on a license-by-license basis or through a rulemaking, even if the affected licenses were awarded at auction.

The Commission previously has required wireless licensees to comply with open Internet principles, as appropriate in the particular situation before it. In 2007, when it modified the service rules for the 700 MHz band, the Commission took ''a measured step to encourage additional innovation and consumer choice at this critical stage in the evolution of wireless broadband services.'' Specifically, the Commission required C block licensees ''to allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choosing in C Block networks, so long as they 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).'' The open Internet conditions we adopt in this Order likewise are necessary to advance the public interest in innovation and investment.[158]

AT&T contends that the Commission cannot apply ''neutrality'' regulations to wireless broadband services outside the upper 700 MHz C Block spectrum because any such regulations ''would unlawfully rescind critical rulings in the Commission's *700 MHz Second Report and Order* on which providers relied in making multi-billion dollar investments,'' [159] and that adopting these regulations more broadly to all mobile providers would violate the Administrative Procedure Act. We disagree. As explained above, the Commission retains the statutory authority to impose new requirements on existing licenses beyond those that were in place at the time of grant, whether the licenses were assigned by

Programs with DishOnline, *http://www.dish-systems.com/products/dish_online.php* (noting that customers can watch content from cable programmers such as the Discovery Channel and MTV). Thus, we reject NCTA's argument that ''[t]here is no basis for asserting that any cable operator or common carrier's practices with respect to Internet-delivered video could * * * 'prevent or significantly hinder' an MVPD from providing satellite cable programming.'' NCTA Dec. 10, 2010 *Ex Parte* Letter at 5.

[151] Notwithstanding suggestions to the contrary, the Commission is not required to wait until anticompetitive harms are realized before acting. Rather, the Commission may exercise its ancillary jurisdiction to ''plan in advance of foreseeable events, instead of waiting to react to them.'' *Sw. Cable,* 392 U.S. at 176–77 (citation and internal quotation marks omitted); *see also Star Wireless, LLC* v. *FCC,* 522 F.3d at 475.

[152] *See Open Internet NRPM,* 24 FCC Rcd at 13099, para. 85 (discussing role of the Internet in fostering video programming competition and the Commission's authority to regulate video services).

[153] An MVPD is ''a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming.'' 47 U.S.C. 522(13). A ''video programming vendor'' is any ''person engaged in the production, creation, or wholesale distribution of video programming for sale.'' 47 U.S.C. 536(b). A number of video programming vendors make their programming available online. *See, e.g.,* Hulu.com, *http://www.hulu.com/about*; Biography Channel, *http://www.biography.com;* Hallmark Channel, *http://www.hallmarkchannel.com.*

[154] 47 U.S.C. 536(a)(1)–(3); *see also* 47 CFR 76.1301 (implementing regulations to address practices specified in Section 616(a)(1)–(3)).

[155] The Act does not define ''related practices'' as that phrase is used in Section 616(a). Because the term is neither explicitly defined in the statute nor susceptible of only one meaning, we construe it, consistent with dictionary definitions, to cover practices that are ''akin'' or ''connected'' to those specifically identified in Section 616(a)(1)–(3). *See Black's Law Dictionary* 1158 (5th ed. 1979); *Webster's Third New Int'l Dictionary* 1916 (1993). The argument that Section 616(a) has no application to Internet access service overlooks that the statute expressly covers these ''related practices.''

[156] 47 U.S.C. 304, 316(a)(1). We thus disagree with commenters who suggest in general that there is nothing in Title III to support the imposition of open Internet rules. *See, e.g.,* EFF Comments at 6 n. 13.

[157] 47 U.S.C. 309(a); *see also* 47 U.S.C. 307(a) (''The Commission, if public convenience, interest, or necessity will be served thereby, subject to the limitations of this [Act], shall grant to any applicant therefor a station license provided for by this [Act].'').

[158] In addition, the use of mobile VoIP applications is likely to constrain prices for CMRS voice services, similar to what we described earlier with regard to VoIP and traditional phone services.

[159] AT&T PN Reply at 32. AT&T asserts that winners of non-C-Block licenses paid a premium for licenses not subject to the open platform requirements that applied to the upper 700 MHz C Block licenses. *Id.* at 33–34.

auction or by other means.[160] In this case, parties were made well aware that the agency might extend openness requirements beyond the C Block, diminishing any reliance interest they might assert.[161] To the extent that AT&T argues that application of openness principles reduced auction bids on the C Block spectrum, we find that the reasons for the price differences between the C Block and other 700 MHz spectrum blocks are far more complex. A number of factors, including unique auction dynamics and significant differences between the C Block spectrum and other blocks of 700 MHz spectrum contributed to these price differences. In balancing the public interest factors we are required to consider, we have determined that adopting a targeted set of rules that apply to all mobile broadband providers is necessary at this time.

*D. Authority To Collect Information To Enable the Commission To Perform Its Reporting Obligations to Congress*

Additional sections of the Communications Act provide authority for our transparency requirement in particular. Section 4(k) provides for an annual report to Congress that ''shall contain * * * such information and data collected by the Commission as may be considered of value in the determination of questions connected with the regulation of interstate * * * wire and radio communication'' and provide ''recommendations to Congress as to additional legislation which the Commission deems necessary or desirable.'' [162] The Commission has previously relied on Section 4(k), among other provisions, as a basis for its authority to gather information.[163] The *Comcast* court, moreover, ''readily accept[ed]'' that ''certain assertions of Commission authority could be 'reasonably ancillary' to the Commission's statutory responsibility to issue a report to Congress. For example, the Commission might impose disclosure requirements on regulated entities in order to gather data needed for such a report.'' [164] We adopt such disclosure requirements here.

Finally, the Commission has broad authority under Section 218 of the Act to obtain ''full and complete information'' from common carriers and their affiliates. To the extent broadband providers are affiliated with communications common carriers, Section 218 allows the Commission to require the provision of information such as that covered by the transparency rule we adopt in this Order.[165] We believe that these disclosure requirements will assist us in carrying out our reporting obligations to Congress.

*E. Constitutional Issues*

Some commenters contend that open Internet rules violate the First Amendment and amount to an unconstitutional taking under the Fifth Amendment. We examine these constitutional arguments below, and find them unfounded.

1. First Amendment

Several broadband providers argue that open Internet rules are inconsistent with the free speech guarantee of the First Amendment. These commenters generally contend that because broadband providers distribute their own and third-party content to customers, they are speakers entitled to First Amendment protections. Therefore, they argue, rules that prevent broadband providers from favoring the transmission of some content over other content violate their free speech rights. Other commenters contend that none of the proposed rules implicate the First Amendment, because providing broadband service is conduct that is not correctly understood as speech.

In arguing that broadband service is protected by the First Amendment, AT&T compares its provision of broadband service to the operation of a cable television system, and points out that the Supreme Court has determined that cable programmers and cable operators engage in speech protected by the First Amendment. The analogy is inapt. When the Supreme Court held in *Turner I* that cable operators were protected by the First Amendment, the critical factor that made cable operators ''speakers'' was their production of programming and their exercise of ''editorial discretion over which programs and stations to include'' (and thus which to exclude).

Unlike cable television operators, broadband providers typically are best described not as ''speakers,'' but rather as conduits for speech. The broadband Internet access service at issue here does not involve an exercise of editorial discretion that is comparable to cable companies' choice of which stations or programs to include in their service. In this proceeding broadband providers have not, for instance, shown that they market their services as benefiting from an editorial presence.[166] To the contrary, Internet end users expect that they can obtain access to all or substantially all content that is available on the Internet, without the editorial

[160] The Commission may act by rulemaking to modify or impose rules applicable to all licensees or licensees in a particular class; in order to modify specific licenses held by particular licensees, however, the Commission generally is required to follow the modification procedure set forth in 47 U.S.C. 316. *See Comm. for Effective Cellular Rules* v. *FCC,* 53 F.3d 1309, 1319–20 (DC Cir. 1995).

[161] *See generally 700 MHz Second Report and Order,* 22 FCC Rcd at 15358–65. In the *700 MHz Second Report and Order,* the Commission stated that its decision to limit open-platform requirements to the C Block was based on the record before it ''at this time,'' *id.* at 15361, and noted that openness issues in the wireless industry were being considered more broadly in other proceedings. *Id.* at 15363. The public notice setting procedures for the 2008 auction advised bidders that the rules governing auctioned licenses would be subject to ''pending and future proceedings'' before the Commission. *See Auction of 700 MHz Band Licenses Scheduled for January 24, 2008,* Public Notice, 22 FCC Rcd 18141, 18156, para. 42 (2007).

[162] 47 U.S.C. 154(k). In a similar vein, Section 257 of the Act directs the Commission to report to Congress every three years on ''market entry barriers'' that the Commission recommends be eliminated, including ''barriers for entrepreneurs and other small businesses in the provision and ownership of telecommunications services and information services.'' 47 U.S.C. 257(a) & (c); *see also Comcast,* 600 F.3d at 659; NCTA Dec. 10, 2010 *Ex Parte* Letter at 3 (''[S]ection 257's reporting mandate provides a basis for the Commission to require providers of broadband Internet access service to disclose the terms and conditions of service in order to assess whether such terms hamper small business entry and, if so, whether any legislation may be required to address the problem.'') (footnote omitted).

[163] *See, e.g., New Part 4 of the Commission's Rules Concerning Disruptions to Commc'ns,* Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830, 16837, paras. 1, 12 (2004) (extending Commission's reporting requirements for communications disruptions to certain providers of non-wireline communications, in part based on Section 4(k)); *DTV Consumer Educ. Initiative,* Report & Order, 23 FCC Rcd 4134, 4147, paras. 1, 2, 28 (2008) (requiring various entities, including broadcasters, to submit quarterly reports to the Commission detailing their consumer education efforts related to the DTV transition, in part based on section 4(k)); *Review of the Commission's Broad. Cable and Equal Emp't Opportunity Rules and Policies,* Second Report and Order and Third Notice of Proposed Rulemaking, 17 FCC Rcd 24018, 24077, paras. 5, 195 (2002) (promulgating recordkeeping and reporting requirements for broadcast licensees and other regulated entities to show compliance with equal opportunities hiring rules, in part based on section 4(k)).

[164] 600 F.3d at 659. All, or nearly all, providers of broadband Internet access service are regulated by the Commission insofar as they operate under certificates to provide common carriage service, or under licenses to use radio spectrum.

[165] *Cf. US West, Inc.* v. *FCC,* 778 F.2d 23, 26–27 (DC Cir. 1985) (acknowledging Commission's authority under Section 218 to impose reporting requirements on holding companies that owned local telephone companies).

[166] *See, e.g.,* AT&T, AT&T U-verse, *http://www.att-services.net/att-u-verse.html* (AT&T U-verse: ''Customers can get the information they want, when they want it''); Verizon, FiOS Internet, *http://www22.verizon.com/Residential/FiOSInternet/Overview.htm and Verizon,* High Speed Internet, *http://www22.verizon.com/Residential/HighSpeedInternet* (Verizon FiOS and High Speed Internet: ''Internet, plus all the free extras'').

intervention of their broadband provider.[167]

Consistent with that understanding, broadband providers maintain that they qualify for statutory immunity from liability for copyright violations or the distribution of offensive material precisely because they lack control over what end users transmit and receive.[168] In addition, when defending themselves against subpoenas in litigation involving alleged copyright violations, broadband providers typically take the position that they are simply conduits of information provided by others.[169]

To be sure, broadband providers engage in network management practices designed to protect their Internet services against spam and malicious content, but that practice bears little resemblance to an editor's choosing which programs, among a range of programs, to carry.[170] Furthermore, this Order does not limit broadband providers' ability to modify their own Web pages, or transmit any lawful message that they wish, just like any other speaker. Broadband providers are also free under this Order to offer a wide range of ''edited'' services. If, for example, a broadband provider wanted to offer a service limited to ''family friendly'' materials to end users who desire only such content, it could do so under the rules we promulgate in this Order.

AT&T and NCTA argue that open Internet rules interfere with the speech rights of content and application providers to the extent they are prevented from paying broadband providers for higher quality service. Purchasing a higher quality of termination service for one's own Internet traffic, though, is not speech—just as providing the underlying transmission service is not. Telephone common carriers, for instance, transmit users' speech for hire, but no court has ever suggested that regulation of common carriage arrangements triggers First Amendment scrutiny.

Even if open Internet rules did implicate expressive activity, they would not violate the First Amendment. Because the rules are based on the characteristics of broadband Internet access service, independent of content or viewpoint, they would be subject to intermediate First Amendment scrutiny.[171] The regulations in this Order are triggered by a broadband provider offering broadband Internet access, not by the message of any provider. Indeed, the point of open Internet rules is to protect traffic regardless of its content. Verizon's argument that such regulation is presumptively suspect because it makes speaker-based distinctions likewise lacks merit: Our action is based on the transmission service provided by broadband providers rather than on what providers have to say. In any event, speaker-based distinctions are permissible so long as they are '''justified by some special characteristic of' the particular medium being regulated''—here the ability of broadband providers to favor or disfavor Internet traffic to the detriment of innovation, investment, competition, public discourse, and end users.

Under intermediate scrutiny, a content-neutral regulation will be sustained if ''it furthers an important or substantial government interest * * * unrelated to the suppression of free expression,'' and if ''the means chosen'' to achieve that interest ''do not burden substantially more speech than is necessary.'' The government interests underlying this Order—preserving an open Internet to encourage competition and remove impediments to infrastructure investment while enabling consumer choice, end-user control, free expression, and the freedom to innovate without permission—ensure the public's access to a multiplicity of information sources and maximize the Internet's potential to further the public interest. As a result, these interests satisfy the intermediate-scrutiny standard.[172] Indeed, the interest in keeping the Internet open to a wide range of information sources is an important free speech interest in its own right. As *Turner I* affirmed, ''assuring that the public has access to a multiplicity of information sources is a governmental purpose of the highest order, for it promotes values central to the First Amendment.'' [173] This Order protects the speech interests of all Internet speakers.

Time Warner and Verizon contend that the government lacks important or substantial interests because the harms from prohibited practices supposedly are speculative. This ignores actual instances of harmful practices by broadband providers, as discussed in Part II.B. In any event, the Commission is not required to stay its hand until substantial harms already have occurred. On the contrary, the Commission's predictive judgments as to the development of a problem and likely injury to the public interest are entitled to great deference.

In sum, the rules we adopt are narrowly tailored to advance the important government interests at stake.

[167] *See* Verizon Comments at 117 (''[B]roadband providers today provide traditional Internet access services that offer subscribers access to *all lawful content* and have strong economic incentives to continue to do so.'') (emphasis added).

[168] *See* 17 U.S.C. 512(a) (a ''service provider shall not be liable * * * for infringement of copyright by reason of the provider's transmitting, routing, or providing connections for'' material distributed by others on its network); 47 U.S.C. 230(c)(1) (''[N]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider''); *see also Recording Indus. Ass'n of Am., Inc.* v. *Verizon Internet Servs., Inc.,* 351 F.3d 1229, 1234 (DC Cir. 2003) (discussing in context of subpoena issued to Verizon under the Digital Millennium Copyright Act Section 512(a)'s ''four safe harbors, each of which immunizes ISPs from liability from copyright infringement''), *cert. denied,* 543 U.S. 924 (2004). For example ''Verizon.net, the home page for Verizon Internet customers, contains a notice explicitly claiming copyright over the contents of the page. In contrast, the terms of service of Verizon Internet access explicitly disclaim any affiliation with content transmitted over the network.'' PK Reply at 22.

[169] *See, e.g., Charter Commc'ns, Inc., Subpoena Enforcement Matter,* 393 F.3d 771, 777 (8th Cir. 2005) (subpoenas served on Charter were not authorized because ''Charter's function'' as a broadband provider ''was limited to acting as a conduit for the allegedly copyright protected material'' at issue); *Verizon Internet Servs.,* 351 F.3d at 1237 (accepting Verizon's argument that Federal copyright law ''does not authorize the issuance of a subpoena to an ISP acting as a mere conduit for the transmission of information sent by others'').

[170] We recognize that in two cases, Federal district courts have concluded that the provision of broadband service is ''speech'' protected by the First Amendment. In *Itasca,* the district court reasoned that broadband providers were analogous to cable and satellite television companies, which are protected by the First Amendment. *Ill. Bell Tel. Co.* v. *Vill. of Itasca,* 503 F. Supp. 2d 928, 947–49 (N.D. Ill. 2007). And in *Broward County,* the district court determined that the transmission function provided by broadband service could not be separated from the content of the speech being transmitted. *Comcast Cablevision of Broward Cnty., Inc.* v. *Broward Cnty.,* 124 F. Supp. 2d 685, 691–92 (S.D. Fla. 2000). For the reasons stated, we disagree with the reasoning of those decisions.

[171] *See Turner I,* 512 U.S. at 642. Regulations generally are content neutral if justified without reference to content or viewpoint. *Id.* at 643; *BellSouth Corp.* v. *FCC,* 144 F.3d 58, 69 (DC Cir. 1998); *Time Warner Entm't Co., L.P.* v. *FCC,* 93 F.3d 957, 966–67 (DC Cir. 1996).

[172] These interests are consistent with the Communications Act's charge to the Commission to make available a ''rapid and efficient'' national communications infrastructure, 47 U.S.C. 151; to promote, consistent with a ''vibrant and competitive free market,'' ''the continued development of the Internet and other interactive computer services''; and to ''encourage the development of technologies which maximize user control over what information is received,'' 47 U.S.C. 230(b)(1)–(3). Indeed, AT&T concedes that ''[t]here is little doubt that preservation of an open and free Internet is an 'important or substantial government interest.' '' AT&T Comments at 237 (quoting *Turner I,* 512 U.S. at 662).

[173] 512 U.S. at 663. The *Turner I* Court continued: ''Indeed, it has long been a basic tenet of national communications policy that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public.'' *Id.* (internal quotation marks omitted). *See also FCC* v. *Nat'l Citizens Comm. for Broad.,* 436 U.S. 775, 795 (1978) (*NCCB*) (quoting *Associated Press* v. *United States,* 326 U.S. 1, 20 (1945)).

The rules apply only to that portion of the end user's link to the Internet over which the end user's broadband provider has control. They forbid only those actions that could unfairly impede the public's use of this important resource. Broadband providers are left with ample opportunities to transmit their own content, to maintain their own Web sites, and to engage in reasonable network management. In addition, they can offer edited services to their end users. The rules are narrowly tailored because they address the problem at hand, and go no farther.[174]

2. Fifth Amendment Takings

Contrary to the claims of some broadband providers, open Internet rules pose no issue under the Fifth Amendment's Takings Clause. Our rules do not compel new services or limit broadband providers' flexibility in setting prices for their broadband Internet access services, but simply require transparency and prevent broadband providers—when they *voluntarily* carry Internet traffic—from blocking or unreasonably discriminating in their treatment of that traffic. Moreover, this Order involves setting policies for communications networks, an activity that has been one of this Commission's central duties since it was established in 1934.

Absent compelled permanent physical occupations of property,[175] takings analysis involves ''essentially ad hoc, factual inquiries'' regarding such factors as the degree of interference with ''investment-backed expectations,'' the ''economic impact of the regulation'' and ''the character of the government action.'' In this regard, takings law makes clear that property owners cannot, as a general matter, expect that existing legal requirements regarding their property will remain entirely unchanged. As discussed in Part II, the history of broadband Internet access services offers no basis for reasonable reliance on a policy regime in which providers are free to conceal or discriminate without limit, and the rules we adopt in this Order should not impose substantial new costs on broadband providers.[176] Accordingly, our Order does not raise constitutional concerns under regulatory takings analysis.

## V. Enforcement

Prompt and effective enforcement of the rules adopted in this Order is crucial to preserving an open Internet and providing clear guidance to stakeholders. We anticipate that many of the disputes that will arise regarding alleged open Internet violations—particularly those centered on engineering-focused questions—will be resolvable by the parties without Commission involvement. We thus encourage parties to endeavor to resolve disputes through direct negotiation focused on relevant technical issues, and to consult with independent technical bodies. Many commenters endorse this approach.[177]

Should issues develop that are not resolved through private processes, the Commission will provide backstop mechanisms to address such disputes.[178] In the *Open Internet NPRM,* the Commission proposed to enforce open Internet rules through case-by-case adjudication, a proposal that met with almost universal support among commenters. The Commission also sought comment on whether it should adopt complaint procedures specifically governing alleged violations of open Internet rules, and whether any of the Commission's existing rules provide a suitable model.

*A. Informal Complaints*

Many commenters urge the Commission to adopt informal complaint procedures that equip end users and edge providers with a simple and cost-effective option for calling attention to open Internet rule violations. We agree that end users, edge providers, and others should have an efficient vehicle to bring potential open Internet violations to the Commission, and indeed, such a vehicle is already available. Parties may submit complaints to the Commission pursuant to Section 1.41 of the Commission's rules. Unlike formal complaints, no filing fee is required. We recommend that end users and edge providers submit any complaints through the Commission's Web site, at *http://esupport.fcc.gov/complaints.htm.* The Consumer and Governmental Affairs Bureau will also make available resources explaining these rules and facilitating the filing of informal complaints. Although individual informal complaints will not typically result in written Commission orders, the Enforcement Bureau will examine trends or patterns in complaints to identify potential targets for investigation and enforcement action.[179]

*B. Formal Complaints*

Many commenters propose that the Commission adopt formal complaint procedures to address open Internet disputes. We agree that such procedures should be available in the event an open Internet dispute cannot be resolved through other means. Formal complaint processes permit anyone—including individual end users and edge providers—to file a claim alleging that another party has violated a statute or rule, and asking the Commission to rule on the dispute. A number of commenters suggest that existing Commission procedural rules could readily be utilized to govern open Internet complaints.

We conclude that adopting a set of procedures based on our Part 76 cable access complaint rules will best suit the needs of open Internet disputes that may arise.[180] Although similar to the

[174] AT&T contends (AT&T Comments at 219–20) that our rules would conflict with prohibitions contained in Section 326 of the Act against ''censorship'' of ''radio communications'' or interference with ''the right of free speech by means of radio communication.'' 47 U.S.C. 326. For the same reasons that our rules do not violate the First Amendment, they do not violate Section 326's statutory prohibition.

[175] Verizon contends that ''[t]o the extent the proposed rules would prohibit the owner of a broadband network from setting the terms on which other providers can occupy its property, the rule would give those providers the equivalent of a permanent easement on the network—a form of physical occupation.'' Verizon Comments at 119 (citing *Loretto* v. *Teleprompter Manhattan CATV Corp.,* 458 U.S. 419, 430 (1982)). Not so. Such transmissions are neither ''occupations'' nor ''permanent.'' *See Loretto,* 458 U.S. at 435 n.12; *see also Cablevision Sys. Corp.* v. *FCC,* 570 F.3d 83, 98 (2d Cir. 2009) (upholding Commission's finding that a must-carry obligation did not constitute a physical occupation because ''the transmission of WRNN's signal does not involve a physical occupation of Cablevision's equipment or property''). In addition, to the extent broadband providers voluntarily allow any customer to transmit or receive information, the imposition of reasonable non-discrimination requirements would not be a taking under *Loretto. See Hilton Washington Corp.* v. *District of Columbia,* 777 F.2d 47 (DC Cir. 1985); *Yee* v. *City of Escondido,* 503 U.S. 519, 531 (1992).

[176] This history likewise refutes the assertion that prior Commission decisions ''engendered serious reliance interests'' that would be unsettled by our adoption of open Internet rules. Baker Statement at *11 n.41 (citation and internal quotation marks omitted).

[177] *See, e.g.,* Bright House Networks Comments at 10; CCIA Comments at 2, 34; Google-Verizon Joint Comments at 4 (''A robust role for technical and industry groups should be encouraged to address any challenges or problems that may arise and to help guide the practices of all players. * * *''); WISPA Comments at 14–16; DISH Network Reply at 24–26; Qwest Reply at 32.

[178] Providers and other parties may also seek guidance from the Commission on questions about the application of the open Internet rules in particular contexts, for instance by requesting a declaratory ruling. *See* 47 CFR 1.2.

[179] As with our other complaint rules, the availability of complaint procedures does not bar the Commission from initiating separate and independent enforcement proceedings for potential violations. *See* 47 CFR 0.111(a)(16).

[180] The Commission is authorized to resolve formal complaints—and adopt procedural rules governing the process—pursuant to Sections 4(i)

complaint rules under Section 208, we find that the part 76 rules are more streamlined and thus preferable.[181]

Under the rules we adopt in this Order, any person may file a formal complaint. Before filing a complaint, a complainant must first notify the defendant in writing that it intends to file a complaint with the Commission for violation of rules adopted in this Order.[182] After the complaint has been filed, the defendant must submit an answer, and the complainant may submit a reply. In some cases, the facts might be uncontested, and the proceeding can be completed based on the pleadings. In other cases, a thorough analysis of the challenged conduct might require further factual development and briefing.[183] Based on the record developed, Commission staff (or the Commission itself) will issue an order determining the lawfulness of the challenged practice.

As in other contexts, complainants in open Internet proceedings will ultimately bear the burden of proof to demonstrate by a preponderance of the evidence that an alleged violation of the rules has occurred. A number of commenters propose, however, that once a complainant makes a *prima facie* showing that an open Internet rule has been violated, the burden should shift to the broadband provider to demonstrate that the challenged practice is reasonable. This approach is appropriate in the context of certain open Internet complaints, when the evidence necessary to apply the open Internet rules is predominantly in the possession of the broadband provider. Accordingly, we require a complainant alleging a violation of the open Internet rules to plead fully and with specificity the basis of its claims and to provide facts, supported when possible by documentation or affidavit, sufficient to establish a *prima facie* case of an open Internet violation. In turn, the broadband provider must answer each claim with particularity and furnish facts, supported by documentation or affidavit, demonstrating the reasonableness of the challenged practice. At that point, the complainant will have the opportunity to demonstrate that the practice is not reasonable. Should experience reveal the need to adjust the burden of proof in open Internet disputes, we will do so as appropriate.

Several commenters urge the Commission to adopt timelines for the complaint process. We recognize the need to resolve alleged violations swiftly, and accordingly will allow requests for expedited treatment of open Internet complaints under the Enforcement Bureau's Accelerated Docket procedures.[184]

In resolving formal complaints, the Commission will draw on resources from across the agency—including engineering, economic, and legal experts—to resolve open Internet complaints in a timely manner. In addition, we will take into account standards and best practices adopted by relevant standard-setting organizations, and such organizations and outside advisory groups also may provide valuable technical assistance in resolving disputes. Further, in order to facilitate prompt decision-making, when possible we will resolve open Internet formal complaints at the bureau level, rather than the Commission level.[185]

### *C. FCC Initiated Actions*

As noted above, in addition to ruling on complaints, the Commission has the authority to initiate enforcement actions on its own motion. For instance, Section 403 of the Act permits the Commission to initiate an inquiry concerning any question arising under the Act, and Section 503(b) authorizes us to issue citations and impose forfeiture penalties for violations of our rules. Should the Commission find that a broadband Internet provider is engaging in activity that violates the open Internet rules, we will take appropriate enforcement action, including the issuance of forfeitures.

## VI. Effective Date, Open Internet Advisory Committee, and Commission Review

Some of the rules adopted in this Order contain new information collection requirements subject to the Paperwork Reduction Act (PRA). Our rules addressing transparency are among those requiring PRA approval. The disclosure rule is essential to the proper functioning of our open Internet framework, and we therefore make all the rules we adopt in this Order effective November 20, 2011.

To assist the Commission in monitoring the state of Internet openness and the effects of our rules, we intend to create an Open Internet Advisory Committee. The Committee, to be created in consultation with the General Services Administration pursuant to the Federal Advisory Committee Act, will be an inclusive and transparent body that will hold public meetings. It will be comprised of a balanced group including consumer advocates; Internet engineering experts; content, application, and service providers; network equipment and end-user-device manufacturers and suppliers; investors; broadband service providers; and other parties the Commission may deem appropriate. The Committee will aid the Commission in tracking developments with respect to the freedom and openness of the Internet, in particular with respect to issues discussed in this Order, including technical standards and issues relating to mobile broadband and specialized services. The Committee will report to the Commission and make recommendations it deems appropriate concerning our open Internet framework.

In light of the pace of change of technologies and the market for broadband Internet access service, and to evaluate the efficacy of the framework adopted in this Order for preserving Internet openness, the Commission will review all of the rules in this Order no later than two years from their effective date, and will adjust its open Internet framework as appropriate.

## VII. Procedural Matters

### *A. Final Regulatory Flexibility Analysis*

As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was included in the *Open Internet NPRM* in GN Docket No. 09–191 and WC Docket No. 07–52. The Commission sought written public

and 4(j) of the Act. 47 U.S.C.. 154(i), 154(j). In addition, Section 403 of the Act enables the Commission to initiate inquiries and enforce orders on its own motion. 47 U.S.C. 403. Inherent in such authority is the ability to resolve disputes concerning violations of the open Internet rules.

[181] The Part 76 rules were promulgated to address complaints against cable systems. *See 1998 Biennial Regulatory Review—Part 76—Cable Television Service Pleading and Complaint Rules,* Report and Order, 14 FCC Rcd 418, 420, para. 6 (1999) (''*1998 Biennial Review*''). For example, a local television station may bring a complaint, pursuant to the Part 76 rules, claiming that it was wrongfully denied carriage on a cable system. *See* 47 CFR 76.61. Some complaints alleging open Internet violations may be analogous, such as those brought by a content or application provider claiming that broadband providers—many of which are cable companies—are unlawfully blocking or degrading access to end users.

[182] As with other formal complaint procedures, a filing fee will be required. *See* 47 CFR 1.1106.

[183] The rules give the Commission discretion to order other procedures as appropriate, including briefing, status conferences, oral argument, evidentiary hearings, discovery, or referral to an administrative law judge. *See* 47 CFR 8.14(e) through (g).

[184] *See* 47 CFR 1.730. Furthermore, for good cause, pursuant to 47 CFR 1.3, the Commission may shorten the deadlines or otherwise revise the procedures herein to expedite the adjudication of complaints.

[185] The rules adopted in this Order explicitly authorize the Enforcement Bureau to resolve complaints alleging open Internet violations.

comment on the proposals in these dockets, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

Need for, and Objectives of, the Rules

In this Order the Commission takes an important step to preserve the Internet as an open platform for innovation, investment, job creation, economic growth, competition, and free expression. To provide greater clarity and certainty regarding the continued freedom and openness of the Internet, we adopt three basic rules that are grounded in broadly accepted Internet norms, as well as our own prior decisions:

i. Transparency. Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services;

ii. No blocking. Fixed broadband providers may not block lawful content, applications, services, or non-harmful devices; mobile broadband providers may not block lawful Web sites, or block applications that compete with their voice or video telephony services; and

iii. No unreasonable discrimination. Fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic.

We believe these rules, applied with the complementary principle of reasonable network management, will empower and protect consumers and innovators while helping ensure that the Internet continues to flourish, with robust private investment and rapid innovation at both the core and the edge of the network. This is consistent with the National Broadband Plan goal of broadband access that is ubiquitous and fast, promoting the global competitiveness of the United States.

In late 2009, we launched a public process to determine whether and what actions might be necessary to preserve the characteristics that have allowed the Internet to grow into an indispensable platform supporting our nation's economy and civic life, and to foster continued investment in the physical networks that enable the Internet. Since then, more than 100,000 commenters have provided written input. Commission staff held several public workshops and convened a Technological Advisory Process with experts from industry, academia, and consumer advocacy groups to collect their views regarding key technical issues related to Internet openness.

This process has made clear that the Internet has thrived because of its freedom and openness—the absence of any gatekeeper blocking lawful uses of the network or picking winners and losers online. Consumers and innovators do not have to seek permission before they use the Internet to launch new technologies, start businesses, connect with friends, or share their views. The Internet is a level playing field. Consumers can make their own choices about what applications and services to use and are free to decide what content they want to access, create, or share with others. This openness promotes competition. It also enables a self-reinforcing cycle of investment and innovation in which new uses of the network lead to increased adoption of broadband, which drives investment and improvements in the network itself, which in turn lead to further innovative uses of the network and further investment in content, applications, services, and devices. A core goal of this Order is to foster and accelerate this cycle of investment and innovation.

The record and our economic analysis demonstrate, however, that the openness of the Internet cannot be taken for granted, and that it faces real threats. Indeed, we have seen broadband providers endanger the Internet's openness by blocking or degrading content and applications without disclosing their practices to end users and edge providers, notwithstanding the Commission's adoption of open Internet principles in 2005. In light of these considerations, as well as the limited choices most consumers have for broadband service, broadband providers' financial interests in telephony and pay television services that may compete with online content and services, and the economic and civic benefits of maintaining an open and competitive platform for innovation and communication, the Commission has long recognized that certain basic standards for broadband provider conduct are necessary to ensure the Internet's continued openness. The record also establishes the widespread benefits of providing greater clarity in this area—clarity that the Internet's openness will continue; that there is a forum and procedure for resolving alleged open Internet violations; and that broadband providers may reasonably manage their networks and innovate with respect to network technologies and business models. We expect the costs of compliance with our prophylactic rules to be small, as they incorporate longstanding openness principles that are generally in line with current practices and with norms endorsed by many broadband providers. Conversely, the harms of open Internet violations may be substantial, costly, and in some cases potentially irreversible.

The rules we proposed in the *Open Internet NPRM* and those we adopt in this Order follow directly from the Commission's bipartisan *Internet Policy Statement,* adopted unanimously in 2005 and made temporarily enforceable for certain providers in 2005 and 2006; openness protections the Commission established in 2007 for users of certain wireless spectrum; and a notice of inquiry in 2007 that asked, among other things, whether the Commission should add a principle of nondiscrimination to the *Internet Policy Statement.* Our rules build upon these actions, first and foremost by requiring broadband providers to be transparent in their network management practices, so that end users can make informed choices and innovators can develop, market, and maintain Internet-based offerings. The rules also prevent certain forms of blocking and discrimination with respect to content, applications, services, and devices that depend on or connect to the Internet.

An open, robust, and well-functioning Internet requires that broadband providers have the flexibility to reasonably manage their networks. Network management practices are reasonable if they are appropriate and tailored to achieving a legitimate network management purpose. Transparency and end-user control are touchstones of reasonableness.

We recognize that broadband providers may offer other services over the same last-mile connections used to provide broadband service. These ''specialized services'' can benefit end users and spur investment, but they may also present risks to the open Internet. We will closely monitor specialized services and their effects on broadband service to ensure, through all available mechanisms, that they supplement but do not supplant the open Internet.

Mobile broadband is at an earlier stage in its development than fixed broadband and is evolving rapidly. For that and other reasons discussed below, we conclude that it is appropriate at this time to take measured steps in this area. Accordingly, we require mobile providers to comply with the transparency rule, which includes enforceable disclosure obligations regarding device and application certification and approval processes; we prohibit providers from blocking lawful Web sites; and we prohibit providers from blocking applications that compete with providers' voice and video telephony services. We will closely

monitor the development of the mobile broadband market and will adjust the framework we adopt in this Order as appropriate.

These rules are within our jurisdiction over interstate and foreign communications by wire and radio. Further, they implement specific statutory mandates in the Communications Act (''Act'') and the Telecommunications Act of 1996 (''1996 Act''), including provisions that direct the Commission to promote Internet investment and to protect and promote voice, video, and audio communications services.

The framework we adopt in this Order aims to ensure the Internet remains an open platform—one characterized by free markets and free speech—that enables consumer choice, end-user control, competition through low barriers to entry, and the freedom to innovate without permission. The framework does so by protecting openness through high-level rules, while maintaining broadband providers' and the Commission's flexibility to adapt to changes in the market and in technology as the Internet continues to evolve.

Summary of the Significant Issues Raised by the Public Comments in Response to the IRFA and Summary of the Assessment of the Agency of Such Issues

A few commenters discussed the IRFA from the *Open Internet NPRM.* The Center for Regulatory Effectiveness (CRE) argued that the *Open Internet NPRM*'s IRFA was defective because it ineffectively followed 5 U.S.C. secs. 603(a) (''Such analysis shall describe the impact of the proposed rule on small entities.'') and 603(c) (''Each initial regulatory flexibility analysis shall also contain a description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.''). CRE does not provide any case law to support its interpretation that the Commission is in violation of these aspects of the statute, nor does CRE attempt to argue that SBEs have actually or theoretically been harmed. Rather, CRE is concerned that by not following its reading of these parts of the law, the Commission is being hypocritical by not being transparent enough. CRE recommends that the Commission publish a revised IRFA for public comment. We disagree: we believe that the IRFA was adequate and that the opportunity for SBEs to comment in a publicly accessible docket should remove any potential harm to openness that CRE is concerned with, as well as any harms to SBEs that could occur by not following CRE's interpretation of the law.

The Smithville Telephone Company (Smithville) notes that many ILECs have vastly fewer employees than the 1500 or less that is required to be recognized as a small business under the SBA. For instance, Smithville states that it has seven employees. Smithville also observes that some other small ILECs in Mississippi have staffs of 8, 4, 2, 3, and 21. Smithville argues that companies of this size do not have the resources to fully analyze issues and participate in Commission proceedings. Smithville would like the Commission to use the data that it regularly receives from carriers to set a carrier size where exemptions from proposed rules and less complex reporting requirements can be set. In the present case, however, we determine that this is not necessary. We expect the costs of compliance with these rules to be small, as the high-level rules incorporate longstanding openness principles that appear to be generally in line with most broadband providers' current practices. We note that Smithville does not cite any particular source of increased costs, or attempt to estimate costs of compliance. Nonetheless, the Commission attempts to ease any burden that the transparency rule may cause by only requiring disclosure on a Web site and at the point of sale, making the transparency rule flexible. In addition, by setting the effective date of these rules as November 20, 2011, the Order gives broadband providers adequate time to develop cost-effective methods of compliance. Finally, to the extent that the transparency rule imposes a new obligation on small businesses, we find that the flexibility built into the rule addresses any compliance concerns.

The American Cable Association (ACA) notes that the Commission has an obligation to ''include in the FRFA a comprehensive discussion of the economic impact its actions will have on small cable operators.'' The ACA cites its other comments, which ask the Commission to clarify that the codified principles would not obligate broadband service providers to (1) ''employ specific network management practices,'' (2) ''impose affirmative obligations dealing with unlawful content or the unlawful transfer of content,'' (3) ''accommodate lawful devices that are not supported by a broadband provider's network,'' and (4) ''provide information regarding a company's network management practices through any reporting, recordkeeping, or means other than through a company's Web site or Web page.'' Addressing ACA's arguments with regard to cable operators, and fixed broadband providers in particular, (1), the Commission is not requiring specific network management practices. The Commission only requires that any network management be reasonable; the Commission does not require that any specific practice be employed. Regarding (2), the rules do not impose affirmative obligations dealing with unlawful content or the unlawful transfer of content. We state that the ''no blocking'' rule does not prevent or restrict a broadband provider from refusing to transmit material such as child pornography. In response to (3), the Order clarifies that the ''no blocking'' rule protects only devices that do not harm the network and only requires fixed broadband service providers to allow devices that conform to publicly available industry standards applicable to the providers' services. Directly addressing ACA's concern, the Order notes that a DOCSIS-based provider is not required to support a DSL modem. In response to (4), the disclosure requirement in this Order does not require additional forms of disclosure, other than, at a minimum, requiring broadband providers to prominently display or provide links to disclosures on a publicly available, easily accessible Web site that is available to current and prospective end users and edge providers as well as to the Commission, and disclosing relevant information at the point of sale.

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

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. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. 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).

1. Total Small Entities

Our action 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. First, nationwide, there are a total of approximately 27.2 million small businesses, according to the SBA. 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.'' Nationwide, as of 2002, there were approximately 1.6 million small organizations. 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.'' Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States. We estimate that, of this total, 84,377 entities were ''small governmental jurisdictions.'' Thus, we estimate that most governmental jurisdictions are small.

2. Internet Access Service Providers

*Internet Service Providers.* The 2007 Economic Census places these firms, whose services might include voice over Internet Protocol (VoIP), in either of two categories, depending on whether the service is provided over the provider's own telecommunications facilities (*e.g.,* cable and DSL ISPs), or over client-supplied telecommunications connections (*e.g.,* dial-up ISPs). The former are within the category of Wired Telecommunications Carriers, which has an SBA small business size standard of 1,500 or fewer employees. These are also labeled ''broadband.'' The latter are within the category of All Other Telecommunications, which has a size standard of annual receipts of $25 million or less. These are labeled non-broadband. The most current Economic Census data for all such firms are 2007 data, which are detailed specifically for ISPs within the categories above. For the first category, the data show that 396 firms operated for the entire year, of which 159 had nine or fewer employees. For the second category, the data show that 1,682 firms operated for the entire year. Of those, 1,675 had annual receipts below $25 million per year, and an additional two had receipts of between $25 million and $ 49,999,999. Consequently, we estimate that the majority of ISP firms are small entities.

The ISP industry has changed since 2007. The 2007 data cited above may therefore include entities that no longer provide Internet access service and may exclude entities that now provide such service. To ensure that this FRFA describes the universe of small entities that our action might affect, we discuss in turn several different types of entities that might be providing Internet access service.

3. Wireline Providers

*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. According to Commission data, 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.

*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. According to Commission data, 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 action.

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.'' 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. 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.

*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. According to Commission data, 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 IXCs are small entities that may be affected by our action.

*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. According to Commission data, 33 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 31 have 1,500 or fewer employees and 2 has more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by our proposed action.

4. Wireless Providers—Fixed and Mobile

For reasons discussed above in the text of the Order, the Commission has distinguished wireless fixed broadband Internet access service from wireless mobile broadband Internet access service. Specifically, the Commission decided that fixed broadband Internet access service providers, whether wireline or wireless, must disclose their network management practices and the performance characteristics and commercial terms of their broadband services; may not block lawful content, applications, services or non-harmful

devices; and may not unreasonably discriminate in transmitting lawful network traffic. Also for the reasons discussed above, the Commission decided that wireless mobile broadband Internet access service providers must disclose their network management practices and performance characteristics and commercial terms of their broadband service and may not block lawful Web sites or block applications that compete with their voice or video telephony service. Thus, to the extent the wireless services listed below are used by wireless firms for fixed and mobile broadband Internet access services, the actions in this Order 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.

*Wireless Telecommunications Carriers (except Satellite).* Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category. Prior to that time, such firms were within the now-superseded categories of ''Paging'' and ''Cellular and Other Wireless Telecommunications.'' Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. For the category of Wireless Telecommunications Carriers (except Satellite), preliminary data for 2007 show that there were 11,927 firms operating that year. 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. 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.

*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. The SBA has approved these definitions. 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.

*1670–1675 MHz Services.* This service can be used for fixed and mobile uses, except aeronautical mobile. 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.

*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). Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees. According to *Trends in Telephone Service* data, 413 carriers reported that they were engaged in wireless telephony. Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees. Therefore, more than half of these entities can be considered small.

*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. 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 revenues of not more than $15 million for the preceding three calendar years. These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA. 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. On April 15, 1999, the Commission completed the reauction of 347 C–, D–, E–, and F–Block licenses in Auction No. 22. Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

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. 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. On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71. Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses. On August 20, 2008, the Commission completed the auction of 20 C–, D–, E–, and F–Block Broadband PCS licenses in Auction No. 78. Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.

*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. 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. The SBA has approved these small business size standards for the 900 MHz Service. 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. 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.

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. 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. 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.

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. In addition, we do not know how many of these firms have 1,500 or fewer employees, which is the SBA-determined size standard. 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.

*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. 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. 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 the preceding three years. 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. The SBA approved these small size standards. 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. 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. 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. 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.

In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order.* 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. 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.

*Upper 700 MHz Band Licenses.* In the *700 MHz Second Report and Order,* the Commission revised its rules regarding Upper 700 MHz licenses. 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 nationwide license in the D Block. 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.

*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. 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. 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. SBA approval of these definitions is not required. An auction of 52 Major Economic Area licenses commenced on September 6, 2000, and closed on September 21, 2000. 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.

*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. There are fewer than 10 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. 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. These definitions were approved by the SBA. In May 2006, the 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.

*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, 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.

*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 April 2010, more than 1270 licenses have been granted and more than 7433 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.

*Fixed Microwave Services.* Microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), and the 24 GHz Service, where licensees can choose between common carrier and non-common carrier status. At present, there are approximately 31,428 common carrier fixed licensees and 79,732 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. There are approximately 120 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. Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. For the category of Wireless Telecommunications Carriers (except Satellite), preliminary data for 2007 show that there were 11,927 firms operating that year. 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. 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.

*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)). 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. 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. 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. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas. The Commission offered three levels of bidding credits: (i) A bidder with attributed average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years (small business) will receive a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed $3 million and do not exceed $15 million for the preceding three years (very small business) will receive a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed $3 million for the preceding three years (entrepreneur) will receive a 35 percent discount on its winning bid. Auction 86 concluded in 2009 with the sale of 61 licenses. Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities. Thus, we estimate that at least 1,932 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.'' 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. 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. 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. Thus, the majority of these firms can be considered small.

5. Satellite Service Providers

*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. The second has a size standard of $25 million or less in annual receipts. 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.

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

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.'' For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year. 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. 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

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.

*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.'' 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. 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. 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. Thus, the majority of these firms can be considered small.

*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. Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard. In addition, under the Commission's rules, a ''small system'' is a cable system serving 15,000 or fewer subscribers. 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. Thus, under this second size standard, most cable systems are small.

*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.'' 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. Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard. 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, and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

7. Electric Power Generators, Transmitters, and Distributors

*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.'' 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.'' According to Census Bureau data for 2002, there were 1,644 firms in this category that operated for the entire year. 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.

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

As indicated above, 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 Order requires that broadband providers must, at a minimum, prominently display or provide links to disclosures on a publicly available, easily accessible Web site that is available to current and prospective end users and edge providers as well as to the Commission, and at the point of sale. Providers should ensure that all Web site disclosures are accessible by persons with disabilities. We do not require additional forms of disclosure. Broadband providers' disclosures to the public include disclosure to the Commission; that is, the Commission will monitor public disclosures and may require additional disclosures directly to the Commission. We anticipate that broadband providers may be able to satisfy the transparency rule through a single disclosure, and therefore do not require multiple disclosures targeted at different audiences. This affects all classes of small entities mentioned in Appendix B, part C, and requires professional skills of entering information onto a Web page and an understanding of the entities' network practices, both of which are easily managed by staff of these types of small entities.

Steps Taken To Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

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 entities.

The rules adopted in this Order are generally consistent with current industry practices, so the costs of compliance should be small. Although some commenters assert that a disclosure rule will impose significant burdens on broadband providers, no commenter cites any particular source of increased costs, or attempts to estimate costs of compliance. For a number of reasons, we believe that the costs of the disclosure rule we adopt in this Order are outweighed by the benefits of empowering end users to make informed choices and of facilitating the enforcement of the other open Internet rules. First, we require only that providers post disclosures on their Web sites and at the point of sale, not that they bear the cost of printing and distributing bill inserts or other paper documents to all existing customers. Second, although we may subsequently determine that it is appropriate to require that specific information be disclosed in particular ways, the transparency rule we adopt in this Order gives broadband providers flexibility to determine what information to disclose and how to disclose it. We also expressly exclude from the rule competitively sensitive information, information that would compromise network security, and information that would undermine the efficacy of reasonable network management practices. Third, by setting the effective date of these rules as November 20, 2011, we give broadband providers adequate time to develop cost effective methods of compliance. Thus, the rule gives broadband providers—including small entities—sufficient time and flexibility to implement the rules in a cost-effective manner. Finally, these rules provide certainty and clarity that are beneficial both to broadband providers and to their customers.

Report to Congress

The Commission has sent a copy of the Order, including this FRFA, in a report to Congress and the Government Accountability Office pursuant to the Congressional Review Act. In addition, the Commission will send a copy of the Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA.

*B. Paperwork Reduction Act of 1995 Analysis*

This document contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13.

*C. Congressional Review Act*

The Commission has sent a copy of this Report and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

*D. Data Quality Act*

The Commission certifies that it has complied with the Office of Management and Budget Final Information Quality Bulletin for Peer Review, 70 FR 2664, January 14 (2005), and the Data Quality Act, Public Law 106–554 (2001), codified at 44 U.S.C. 3516 note, with regard to its reliance on influential scientific information in the Report and Order in GN Docket No. 09–191 and WC Docket No. 07–52.

*E. Accessible Formats*

To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty). Contact the FCC to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CARTS, *etc.*) by *e-mail: FCC504@fcc.gov; phone:* (202) 418–0530 (voice), (202) 418–0432 (TTY).

**VIII. Ordering Clauses**

Accordingly, *it is ordered* that, pursuant to Sections 1, 2, 3, 4, 201, 218, 230, 251, 254, 256, 257, 301, 303, 304, 307, 309, 316, 332, 403, 503, 602, 616, and 628, of the Communications Act of 1934, as amended, and Section 706 of the Telecommunications Act of 1996, as amended, 47 U.S.C. secs. 151, 152, 153, 154, 201, 218, 230, 251, 254, 256, 257, 301, 303, 304, 307, 309, 316, 332, 403, 503, 522, 536, 548, 1302, this Report and Order *is adopted.*

*It is further ordered* that Part 0 of the Commission's rules *is amended* as set forth in Appendix B.

*It is further ordered* that Part 8 of the Commission's Rules, 47 CFR Part 8, *is added* as set forth in Appendix A and B.

*It is further ordered* that this Report and Order shall become effective November 20, 2011.

*It is further ordered* that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, *shall send* a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

**List of Subjects**

*47 CFR Part 0*

Cable television, Communications, Common carriers, Communications common carriers, Radio, Satellites, Telecommunications, Telephone.

*47 CFR Part 8*

Cable television, Communications, Common carriers, Communications common carriers, Radio, Satellites, Telecommunications, Telephone.

Federal Communications Commission.

**Marlene H. Dortch,**

*Secretary.*

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 0 to read as follows:

## PART 0—COMMISSION ORGANIZATION

■ 1. The authority citation for part 0 continues to read as follows:

**Authority:** Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 155, 225, unless otherwise noted.

■ 2. Section 0.111 is amended by adding paragraph (a)(24) to read as follows:

### § 0.111 Functions of the Bureau.

(a) * * *

(24) Resolve complaints alleging violations of the open Internet rules.

* * * * *

■ 3. Add part 8 to read as follows:

## PART 8—PRESERVING THE OPEN INTERNET

Sec.

8.1 Purpose.
8.3 Transparency.
8.5 No Blocking.
8.7 No Unreasonable Discrimination.
8.9 Other Laws and Considerations.
8.11 Definitions.
8.12 Formal Complaints.
8.13 General pleading requirements.
8.14 General formal complaint procedures.
8.15 Status conference.
8.16 Confidentiality of proprietary information.
8.17 Review.

**Authority:** 47 U.S.C. secs. 151, 152, 153, 154, 201, 218, 230, 251, 254, 256, 257, 301, 303, 304, 307, 309, 316, 332, 403, 503, 522, 536, 548, 1302.

### § 8.1 Purpose.

The purpose of this part is to preserve the Internet as an open platform enabling consumer choice, freedom of expression, end-user control, competition, and the freedom to innovate without permission.

### § 8.3 Transparency.

A person engaged in the provision of broadband Internet access service shall publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed choices regarding use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings.

### § 8.5 No Blocking.

(a) A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.

(b) A person engaged in the provision of mobile broadband Internet access service, insofar as such person is so engaged, shall not block consumers from accessing lawful Web sites, subject to reasonable network management; nor shall such person block applications that compete with the provider's voice or video telephony services, subject to reasonable network management.

### § 8.7 No Unreasonable Discrimination.

A person engaged in the provision of fixed broadband Internet access service, insofar as such person is so engaged, shall not unreasonably discriminate in transmitting lawful network traffic over a consumer's broadband Internet access service. Reasonable network management shall not constitute unreasonable discrimination.

### § 8.9 Other Laws and Considerations.

(a) Nothing in this part supersedes any obligation or authorization a provider of broadband Internet access service may have to address the needs of emergency communications or law enforcement, public safety, or national security authorities, consistent with or as permitted by applicable law, or limits the provider's ability to do so.

(b) Nothing in this part prohibits reasonable efforts by a provider of broadband Internet access service to address copyright infringement or other unlawful activity.

### § 8.11 Definitions.

(a) *Broadband Internet access service.* A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this part.

(b) *Fixed broadband Internet access service.* A broadband Internet access service that serves end users primarily at fixed endpoints using stationary equipment. Fixed broadband Internet access service includes fixed wireless services (including fixed unlicensed wireless services), and fixed satellite services.

(c) *Mobile broadband Internet access service.* A broadband Internet access service that serves end users primarily using mobile stations.

(d) *Reasonable network management.* A network management practice is reasonable if it is appropriate and tailored to achieving a legitimate network management purpose, taking into account the particular network architecture and technology of the broadband Internet access service.

### § 8.12 Formal Complaints.

Any person may file a formal complaint alleging a violation of the rules in this part.

### § 8.13 General pleading requirements.

(a) *General pleading requirements.* All written submissions, both substantive and procedural, must conform to the following standards:

(1) A pleading must be clear, concise, and explicit. All matters concerning a claim, defense or requested remedy should be pleaded fully and with specificity.

(2) Pleadings must contain facts that, if true, are sufficient to warrant a grant of the relief requested.

(3) Facts must be supported by relevant documentation or affidavit.

(4) The original of all pleadings and submissions by any party shall be signed by that party, or by the party's attorney. Complaints must be signed by the complainant. The signing party shall state his or her address and telephone number and the date on which the document was signed. Copies should be conformed to the original. Each submission must contain a written verification that the signatory has read the submission and to the best of his or her knowledge, information and belief formed after reasonable inquiry, it is well grounded in fact and is warranted by existing law or a good faith argument for the extension, modification or reversal of existing law; and that it is not interposed for any improper purpose. If any pleading or other submission is signed in violation of this provision, the Commission shall upon motion or upon its own initiative impose appropriate sanctions.

(5) Legal arguments must be supported by appropriate judicial, Commission, or statutory authority.

Opposing authorities must be distinguished. Copies must be provided of all non-Commission authorities relied upon which are not routinely available in national reporting systems, such as unpublished decisions or slip opinions of courts or administrative agencies.

(6) Parties are responsible for the continuing accuracy and completeness of all information and supporting authority furnished in a pending complaint proceeding. Information submitted, as well as relevant legal authorities, must be current and updated as necessary and in a timely manner at any time before a decision is rendered on the merits of the complaint.

(7) Parties seeking expedited resolution of their complaint may request acceptance on the Enforcement Bureau's Accelerated Docket pursuant to the procedures at § 1.730 of this chapter.

(b) *Copies to be Filed.* The complainant shall file an original copy of the complaint, accompanied by the correct fee, in accordance with part 1, subpart G (*see* § 1.1106 of this chapter) and, on the same day:

(1) File three copies of the complaint with the Office of the Commission Secretary;

(2) Serve two copies on the Market Disputes Resolution Division, Enforcement Bureau;

(3) Serve the complaint by hand delivery on either the named defendant or one of the named defendant's registered agents for service of process, if available, on the same date that the complaint is filed with the Commission.

(c) *Prefiling notice required.* Any person intending to file a complaint under this section must first notify the potential defendant in writing that it intends to file a complaint with the Commission based on actions alleged to violate one or more of the provisions contained in this part. The notice must be sufficiently detailed so that its recipient(s) can determine the specific nature of the potential complaint. The potential complainant must allow a minimum of ten (10) days for the potential defendant(s) to respond before filing a complaint with the Commission.

(d) *Frivolous pleadings.* It shall be unlawful for any party to file a frivolous pleading with the Commission. Any violation of this paragraph shall constitute an abuse of process subject to appropriate sanctions.

**§ 8.14 General formal complaint procedures.**

(a) *Complaints.* In addition to the general pleading requirements, complaints must adhere to the following requirements:

(1) *Certificate of service.* Complaints shall be accompanied by a certificate of service on any defendant.

(2) *Statement of relief requested*—(i) *The complaint shall state the relief requested.* It shall state fully and precisely all pertinent facts and considerations relied on to demonstrate the need for the relief requested and to support a determination that a grant of such relief would serve the public interest.

(ii) The complaint shall set forth all steps taken by the parties to resolve the problem.

(iii) A complaint may, on request of the filing party, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the petition or complaint. A request for the return of an initiating document will be regarded as a request for dismissal.

(3) Failure to prosecute. Failure to prosecute a complaint, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the initiating pleading.

(b) *Answers to complaints.* Unless otherwise directed by the Commission, any party who is served with a complaint shall file an answer in accordance with the following requirements:

(1) The answer shall be filed within 20 days of service of the complaint.

(2) The answer shall advise the parties and the Commission fully and completely of the nature of any and all defenses, and shall respond specifically to all material allegations of the complaint. Collateral or immaterial issues shall be avoided in answers and every effort should be made to narrow the issues. Any party against whom a complaint is filed failing to file and serve an answer within the time and in the manner prescribed by these rules may be deemed in default and an order may be entered against defendant in accordance with the allegations contained in the complaint.

(3) Facts must be supported by relevant documentation or affidavit.

(4) The answer shall admit or deny the averments on which the adverse party relies. If the defendant is without knowledge or information sufficient to form a belief as to the truth of an averment, the defendant shall so state and this has the effect of a denial. When a defendant intends in good faith to deny only part of an averment, the answer shall specify so much of it as is true and shall deny only the remainder, and state in detail the basis of that denial.

(5) Averments in a complaint are deemed to be admitted when not denied in the answer.

(c) *Reply.* In addition to the general pleading requirements, replies must adhere to the following requirements:

(1) The complainant may file a reply to a responsive pleading that shall be served on the defendant and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. Unless expressly permitted by the Commission, replies shall not contain new matters.

(2) Failure to reply will not be deemed an admission of any allegations contained in the responsive pleading, except with respect to any affirmative defense set forth therein.

(3) Unless otherwise directed by the Commission, replies must be filed within ten (10) days after submission of the responsive pleading.

(d) *Motions.* Except as provided in this section, or upon a showing of extraordinary circumstances, additional motions or pleadings by any party will not be accepted.

(e) *Additional procedures and written submissions.* (1) The Commission may specify other procedures, such as oral argument or evidentiary hearing directed to particular aspects, as it deems appropriate. In the event that an evidentiary hearing is required, the Commission will determine, on the basis of the pleadings and such other procedures as it may specify, whether temporary relief should be afforded any party pending the hearing and the nature of any such temporary relief.

(2) The Commission may require the parties to submit any additional information it deems appropriate for a full, fair, and expeditious resolution of the proceeding, including copies of all contracts and documents reflecting arrangements and understandings alleged to violate the requirements set forth in the Communications Act and in this part, as well as affidavits and exhibits.

(3) The Commission may, in its discretion, require the parties to file briefs summarizing the facts and issues presented in the pleadings and other record evidence.

(i) These briefs shall contain the findings of fact and conclusions of law which that party is urging the Commission to adopt, with specific citations to the record, and supported by relevant authority and analysis.

(ii) The schedule for filing any briefs shall be at the discretion of the Commission. Unless ordered otherwise

by the Commission, such briefs shall not exceed fifty (50) pages.

(iii) Reply briefs may be submitted at the discretion of the Commission. Unless ordered otherwise by the Commission, reply briefs shall not exceed thirty (30) pages.

(f) *Discovery.* (1) The Commission may in its discretion order discovery limited to the issues specified by the Commission. Such discovery may include answers to written interrogatories, depositions, document production, or requests for admissions.

(2) The Commission may in its discretion direct the parties to submit discovery proposals, together with a memorandum in support of the discovery requested. Such discovery requests may include answers to written interrogatories, admissions, document production, or depositions. The Commission may hold a status conference with the parties, pursuant to § 8.15, to determine the scope of discovery, or direct the parties regarding the scope of discovery. If the Commission determines that extensive discovery is required or that depositions are warranted, the Commission may advise the parties that the proceeding will be referred to an administrative law judge in accordance with paragraph (g) of this section.

(g) *Referral to administrative law judge.* (1) After reviewing the pleadings, and at any stage of the proceeding thereafter, the Commission may, in its discretion, designate any proceeding or discrete issues arising out of any proceeding for an adjudicatory hearing before an administrative law judge.

(2) Before designation for hearing, the Commission shall notify, either orally or in writing, the parties to the proceeding of its intent to so designate, and the parties shall be given a period of ten (10) days to elect to resolve the dispute through alternative dispute resolution procedures, or to proceed with an adjudicatory hearing. Such election shall be submitted in writing to the Commission.

(3) Unless otherwise directed by the Commission, or upon motion by the Enforcement Bureau Chief, the Enforcement Bureau Chief shall not be deemed to be a party to a proceeding designated for a hearing before an administrative law judge pursuant to this paragraph (g).

(h) *Commission ruling.* The Commission (or the Enforcement Bureau on delegated authority), after consideration of the pleadings, shall issue an order ruling on the complaint.

**§ 8.15 Status conference.**

(a) In any proceeding subject to the part 8 rules, the Commission may in its discretion direct the attorneys and/or the parties to appear for a conference to consider:

(1) Simplification or narrowing of the issues;

(2) The necessity for or desirability of amendments to the pleadings, additional pleadings, or other evidentiary submissions;

(3) Obtaining admissions of fact or stipulations between the parties as to any or all of the matters in controversy;

(4) Settlement of the matters in controversy by agreement of the parties;

(5) The necessity for and extent of discovery, including objections to interrogatories or requests for written documents;

(6) The need and schedule for filing briefs, and the date for any further conferences; and

(7) Such other matters that may aid in the disposition of the proceeding.

(b) Any party may request that a conference be held at any time after an initiating document has been filed.

(c) Conferences will be scheduled by the Commission at such time and place as it may designate, to be conducted in person or by telephone conference call.

(d) The failure of any attorney or party, following advance notice with an opportunity to be present, to appear at a scheduled conference will be deemed a waiver and will not preclude the Commission from conferring with those parties or counsel present.

(e) During a status conference, the Commission may issue oral rulings pertaining to a variety of matters relevant to the conduct of the proceeding including, inter alia, procedural matters, discovery, and the submission of briefs or other evidentiary materials. These rulings will be promptly memorialized in writing and served on the parties. When such rulings require a party to take affirmative action, such action will be required within ten (10) days from the date of the written memorialization unless otherwise directed by the Commission.

**§ 8.16 Confidentiality of proprietary information.**

(a) Any materials filed in the course of a proceeding under this part may be designated as proprietary by that party if the party believes in good faith that the materials fall within an exemption to disclosure contained in the Freedom of Information Act (FOIA), 5 U.S.C. 552(b). Any party asserting confidentiality for such materials shall so indicate by clearly marking each page, or portion thereof, for which a proprietary designation is claimed. If a proprietary designation is challenged, the party claiming confidentiality will have the burden of demonstrating, by a preponderance of the evidence, that the material designated as proprietary falls under the standards for nondisclosure enunciated in FOIA.

(b) Submissions containing information claimed to be proprietary under this section shall be submitted to the Commission in confidence pursuant to the requirements of § 0.459 of this chapter and clearly marked ''Not for Public Inspection.'' An edited version removing all proprietary data shall be filed with the Commission for inclusion in the public file within five (5) days from the date the unedited reply is submitted, and shall be served on the opposing parties.

(c) Except as provided in paragraph (d) of this section, materials marked as proprietary may be disclosed solely to the following persons, only for use in the proceeding, and only to the extent necessary to assist in the prosecution or defense of the case:

(1) Counsel of record representing the parties in the proceeding and any support personnel employed by such attorneys;

(2) Officers or employees of the parties in the proceeding who are named by another party as being directly involved in the proceeding;

(3) Consultants or expert witnesses retained by the parties;

(4) The Commission and its staff; and

(5) Court reporters and stenographers in accordance with the terms and conditions of this section.

(d) The Commission will entertain, subject to a proper showing, a party's request to further restrict access to proprietary information as specified by the party. The other parties will have an opportunity to respond to such requests.

(e) The persons designated in paragraphs (c) and (d) of this section shall not disclose information designated as proprietary to any person who is not authorized under this section to receive such information, and shall not use the information in any activity or function other than the prosecution or defense of the case before the Commission. Each individual who is provided access to the information by the opposing party shall sign a notarized statement affirmatively stating, or shall certify under penalty of perjury, that the individual has personally reviewed the Commission's rules and understands the limitations they impose on the signing party.

(f) No copies of materials marked proprietary may be made except copies

to be used by persons designated in paragraphs (c) and (d) of this section. Each party shall maintain a log recording the number of copies made of all proprietary material and the persons to whom the copies have been provided.

(g) Upon termination of the complaint proceeding, including all appeals and petitions, all originals and reproductions of any proprietary materials, along with the log recording persons who received copies of such materials, shall be provided to the producing party. In addition, upon final termination of the proceeding, any notes or other work product derived in whole or in part from the proprietary materials of an opposing or third party shall be destroyed.

**§ 8.17 Review.**

(a) *Interlocutory review.* (1) Except as provided below, no party may seek review of interlocutory rulings until a decision on the merits has been issued by the Commission's staff, including an administrative law judge.

(2) Rulings listed in this paragraph are reviewable as a matter of right. An application for review of such ruling may not be deferred and raised as an exception to a decision on the merits.

(i) If the staff's ruling denies or terminates the right of any person to participate as a party to the proceeding, such person, as a matter of right, may file an application for review of that ruling.

(ii) If the staff's ruling requires production of documents or other written evidence, over objection based on a claim of privilege, the ruling on the claim of privilege is reviewable as a matter of right.

(iii) If the staff's ruling denies a motion to disqualify a staff person from participating in the proceeding, the ruling is reviewable as a matter of right.

(b) *Petitions for reconsideration.* Petitions for reconsideration of interlocutory actions by the Commission's staff or by an administrative law judge will not be entertained. Petitions for reconsideration of a decision on the merits made by the Commission's staff should be filed in accordance with §§ 1.104 through 1.106 of this chapter.

(c) *Application for review.* (1) Any party to a part 8 proceeding aggrieved by any decision on the merits issued by the staff pursuant to delegated authority may file an application for review by the Commission in accordance with § 1.115 of this chapter.

(2) Any party to a part 8 proceeding aggrieved by any decision on the merits by an administrative law judge may file an appeal of the decision directly with the Commission, in accordance with §§ 1.276(a) and 1.277(a) through (c) of this chapter.

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