Federal Communications Commission

47 CFR Parts 0 and 8
Preserving the Open Internet; Final Rule
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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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 that 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

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 contend 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 covering 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.

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
communication through the network. 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 on 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 and online advertising.

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.

Streaming video and e-commerce applications, for instance, have led to major network improvements such as fiber to the premises (FTTP), and DOCSIS 3.0. These network improvements generate new opportunities for edge providers, spurring them to innovate further. 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, 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 programming for downloading or streaming to edge providers such as Netflix and Apple.

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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 Web during the 1990s was one factor that helped create demand for residential broadband services. Internet service providers responded by adopting new network infrastructure, modern 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 on the Internet 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: Chroning 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 sources 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 (stating that “44% of Americans say they got news through one or more Internet or mobile digital sources 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).
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; 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%22/0%244043a-9f33-11df-d8c5-00144feabdc0.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 Release from sandvine from/news/pr_detail.aspx?ID=268 (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.


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-democracies-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 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 or 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 access from a third party and VoIP services 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, 22 FCC Rcd No. 65, Memorandum Opinion and Order, 20 FCC Rcd 18290, 18337–38, para. 86 (2005).

13 Tel. Number Requirements for IP-Enabled Serv. 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 18440, 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, 22 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
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, 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. Consistent with these concerns, delivery networks that are vertically integrated with content providers, including some MVPDs, have incentives to favor their own affiliated content. 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 subscribers. In addition, if edge providers pay broadband providers to favor them, the broadband provider’s services will be perceived by end users as being more advantageous than the other edge providers, which might exit or decline to enter the market. This could lead to reduced innovation.

Third, broadband providers may engage in anticompetitive conduct that could affect access to edge providers. For example, a broadband provider may raise access fees for disfavored edge providers, reducing their ability to profit by raising their costs and limiting their ability to compete with favored edge providers.

For access or prioritized access to subscribers, the broadband provider could be acting to exclude rivals or to favor an affiliate. Thus, access fees and other fees for access or prioritized access could lead to reduced competition and innovation.

A broadband provider may also engage in conduct that could make access to its platform more difficult for its competitors. For example, a broadband provider may engage in conduct that could make it more difficult for competitors to access and deliver content to end users. This could include denying access to certain types of content or providing services that are not compatible with competitors’ content or delivery platforms.

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 forestall 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. 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.
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.\(^{23}\)

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,\(^{24}\) no broadband provider has stated in this proceeding that it actually would use 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 4–7; 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, 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/2010/021208/DOR-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, it 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 — 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.\(^{28}\) The roll-out of next generation mobile services is at an early stage, and the future of competition in residential broadband is unclear.\(^{29}\) 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).\(^{30}\) We note that the two largest mobile broadband providers also offer wireline or fixed service;\(^{31}\) this could dampen their incentive to compete aggressively with wireline (or fixed) services.\(^{32}\)

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 Yottahede at 13–14.

We note that the two largest mobile broadband providers also offer wireline or fixed service;\(^{31}\) this could dampen their incentive to compete aggressively with wireline (or fixed) services.\(^{32}\)

In addition, customers may incur significant costs in switching broadband providers\(^{33}\) because of early termination fees;\(^{34}\) 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.
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 undo 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 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 2 at 2–5 (filed May 7, 2010).


38 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 35–39, C. Scott Hemphill, Network Neutrality and the False Promise of Zero-Price Regulation, 25 Yale J. on Reg. 135, 161–62 (2008) ("[S]ocialization 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.

39 See, e.g., Free Press Comments at 4, 23–25; Google Comments at 38–39; XO Comments at 12. In responding to objections raised, 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 broadband Internet access service as information services included notices of proposed rulemaking seeking comment on whether the Commission should adopt

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(i), 123 Stat. 115 (codified at 47 U.S.C. sec. 1305). These nondiscrimination and interconnection obligations apply to all 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.
numerous commentators 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 underlying for substantial 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 wait 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, 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, 14929–33, paras. 146–59 (2005); Inquiry Concerning High-Speed Access to the Internet Over Wireline & 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’].”)

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.

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. End users also stand to benefit from assurances that services on which they depend “won’t suddenly be pulled out from under them, held to 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.

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

For example, AT&T has recognized that open Internet rules “would reduce regulatory uncertainty, and 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 openness and openness are preserved.” See David L. Cohen, FCC Proposes Rules to Preserve an Open Internet, comcastr Back, 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 NIBC 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 20; PIF Comments at 28; WCB Letter 12/10/10, Attach. at 91 (statement of CALinnovates.org), 96 (statement of Tom Wheeler, President & CEO of the Telecommunications Industry Association), 98 (statement of Ron Conway, founder of Sherpalo Ventures), 105 (statement of Dean Garfield, president and CEO of the Information Technology Industry Council), 111 (Dean, 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 Shiriram, founder of Sherpalo Ventures), 132 (statements of Roy Kayame, President & 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 police any market ills.” Id. at 8, 25. 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. We agree, 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 GDT Comments at 8–9, Comm’n on Jon Liebowitz, FTC, Concurring Statement of Commissioner Jon Liebowitz Regarding the Staff Report: “Broadband Connectivity Competition Policy” (Sept. 2007), available at http://speeches.liebowitz/070600statement.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, it was 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, 15, 25. With regard to 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.
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.\footnote{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.\footnote{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 wireless heart monitors, or energy consumption sensors, or to the extent the service relates to the functionality of the device.\footnote{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.\footnote{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.\footnote{49}

Indeed, limiting our rules to voice and video traffic alone could spark a costly and wasteful cut-and-mouse game in which edge providers and end users seeking to obtain the protection of our rules disguised their traffic as protected communications.\footnote{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...
interconnected regardless of the technologies and services end users rely on to access it. However, for reasons discussed in Part I I 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. The discussion in this Part applies to both fixed and mobile broadband, unless specifically noted. Part I I 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 Commission has always intended to protect against the harms to consumers’ expectations for their public facilities, and to ensure that consumers’ expectations for their public Internet access services are met.” 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”). 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. 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.

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. 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. Third, 

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53 We note that Section 337(f)(1) of the Act excludes public safety services from the definition of broadband Internet access service.
54 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.
55 See, e.g., Appropriate Framework for Broadband Access to the Internet over Wireless 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 Rosenworcel, concurring); id. at 14986 (Statement of Commissioner Katz, 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 16290, 16392, para. 211 (2005).
56 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).
57 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, 15060–07, 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.
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 31–32; CALEA Comments at 21; DBS Comments at 2; Google Comments at 11, 64–66; Level 3 Comments at 13; Sandovo 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 Protection, 4 Competition Pol’y Int’l 97–113 (Spring 2008); sprungman.uci.ac.uk/7634/1/7634.pdf.
59 See Pic Reply at 16–18; Free Press Comments at 43–45; ALA 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.

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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. Transparency thereby increases the chances that harmful practices will not occur in the first place and, 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.

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. 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 publicly 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:

Network Practices
- **Congestion Management:** If applicable, descriptions of congestion management practices; types of traffic 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 (DRC) 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 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

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66 See Sandoval Comments at 4–5. For example, the Max Planck Institute analyzed data collected by the Glansom 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 215–19, Max Planck Institute for Software Systems, Glansom: Results from Tests for BitTorrent Traffic Blocking, http://ict992/mobile.htm. Netalyzr is a National Science Foundation-funded project that tests a wide range of network characteristics. See International Computer Science Institute, Netalyzer, netalyzr.isi.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.html.

67 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.

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

69 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;
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.”79

Some concerns have been expressed that broadband providers may seek to neutral with respect to where in the protocol stack or in the network blocking could occur. 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.

We note that MVPDs, pursuant to Section 629 of the Commission’s implementing regulations, are already subject to similar requirements that give end users a right to access services to an MVPD network system provided that the attached equipment does not cause electrical or physical harm to the MVPD or the unauthorized receipt of service. See Implementation of Section 629 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 CPR 76.1201–03. Nothing in this Order is intended to alter those existing rules.

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”).

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 providing network services to 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 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 16–16; Internet Freedom Coalition Reply at 5.

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

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; PARTEC 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, 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, and other speakers, especially those who communicate through video or other content sensitive

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81 “The rapidly developing array of Internet and other interactive computer services * * * offset | 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 agreements 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; Surecast 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 Barriers: 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).


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 “charging[] 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 purview of 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 regulate 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.”

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 Office of the Secretary, FCC, GCN 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. As recently as 1985, Congress adopted the venerable “rule of reason.” Section 202(a) of the Act contains the very term “reasonable” or “unreasonable” that may be independent of providers’ specific regulatory actions and could embrace a strong guidance against an overbroad rule and, instead, develop a standard based on “unreasonable” and “anti-competitive” discrimination.89

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.90 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.”91 This limitation is not relevant to the Commission’s actions here.92 The hallmark of common

87 We reject arguments that our approach to pay-for-priority 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-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 DCT Comments at 25 n.84; George On 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 the retail market 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 John Staurulakis Inc. to FCC, GCN 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, GCN Docket No. 09–191, WC Docket No. 07–52, 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; Brett 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 “beneath 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 Comm’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

88 As recently as 1995, Congress adopted the venerable “rule of reason.” See 47 U.S.C. § 160(c) (further explaining that “the Commission is entitled to deference in interpreting the definition of ‘common carrier.’” See 47 U.S.C. § 160(c). 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)(2), our requirements do not violate the limitation in Section 332(d)(2).

89 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.

90 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 opinion 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 * * relabeled 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.

91 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)(2), our requirements do not violate the limitation in Section 332(c)(2).

92 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
carriage is an “undertak[ing] to carry for all people indifferently.”90 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

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90 See Sw. Bell Tel. Co. v. FCC, 19 F.3d 1475, 1481 (D.C. 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 is a legitimate purpose, 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 that and 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 is not 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.

91 See natural gas cases (quotations omitted)); see also NARUC, 525 F.2d at 630, 641 (DC Cir. 1976) (NARUC I) (suggesting that nondiscrimination is the sine qua non of common carrier regulation referred to in NARUC II).

92 See, e.g., AT&T Comments at 210–11. In taking this approach, we recognize the need to balance clarity with flexibility.

93 Some parties contend that there will be uncertainty associated with open Internet rules, subject to reasonable network management, which will limit provider flexibility. For example, 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 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 6, 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 62, 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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...
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 modems 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 4G devices; 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. 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, 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.

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 providers oppose the application of openness rules generally, 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 willingness 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.

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 expediently 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).

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).

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 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. Mobile 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 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 that 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 the 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 a company 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, No. 9, 2010,

time,\textsuperscript{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,\textsuperscript{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.

\textsuperscript{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 broadband that competes 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.

\textsuperscript{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 Comments at 21 (“The competitive wireless marketplace will continue to discipline app store owners” that exclude third-party apps from their app stores while 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,\textsuperscript{115} for the reasons discussed above, we decide, 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.\textsuperscript{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.

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

\textsuperscript{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; Comp. 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; Verizon PN Comments at 10–18; Windstream PN Comments at 6–19.

\textsuperscript{116} We note that mobile broadband is the only or primary broadband Internet access platform used by many Americans.
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

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.ucprinciples.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 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 provider’s 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, supplementing 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
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.”

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. 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” 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. 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.

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 capacity 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, App. para. 13 (2009) (“advanced telecommunications capability” includes broadband Internet access); Inquiry Concerning the Deployment of Advanced Telecommunications 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—to forbear from applying other provisions of the Act. The Commission’s holding thus honored the interpretative 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, 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 commentators 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

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126 See Comcast, 600 F.3d at 658; see also 47 U.S.C. 1302(d) ("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, e.g., ATR/ 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, GC 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.

128 Consistent with longstanding Supreme Court precedent, we have understood this authority to include our ancillary jurisdiction to further the Commission’s subject matter jurisdiction over "interstate and foreign commerce in communication by wire and radio." Minn. Pub. Utility Comm’n v. FCC, 483 F.3d 570, 578 (8th Cir. 2007); see also Louisiana v. Comm’n v. FCC, 476 U.S. 355, 375 n. 4 (1986). Except to the extent a state requirement conflicts on its face with the Commission’s jurisdiction over interstate commerce, 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., Vouage 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 policy, 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.”

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.

The similarities between the two in fact explain why the Commission has 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. The similarities between 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 would not be the case), it would not be sound policy to attempt to implement rules concerning only voice, video, or audio transmissions over the Internet.

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 “changes [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.” Over-the-top services therefore do, or will, contribute to the marketplace discipline of voice telecommunications services regulated under Section 201.

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 such anticompetitive practices through open Internet rules.\textsuperscript{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).\textsuperscript{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,”\textsuperscript{138} which arise from the Commission’s more general public interest obligation to “ensure the larger and more effective use of radio.”\textsuperscript{139} Similarly, the Commission has broad jurisdiction to oversee MVPD services, including direct-broadcast satellite (DBS).\textsuperscript{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”\textsuperscript{141} and the “more effective use of radio.”\textsuperscript{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,\textsuperscript{143}
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.

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 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,” “increas[e]ng 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[r]ing the development of communications technologies.”

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. 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. Thus, Section 628(b) proscribes practices by cable operators that (i) can impede competition, and (ii) have the purpose or effect of which is not to compete with a cable program service, but to * * * [MVPDs’] traditional TV offerings.”

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. 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.

142 NCTA has noted that “[t]he Commission could decide that the growing importance of broadcast programming distributed over broadband networks to both television viewers and the business of broadcasting itself, ensuring that broadcast video 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, 2016 Ex Parte Letter at 1; 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)).

143 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., VNC 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.

144 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 Modern Declarationary 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 video programming provided by * * * a television broadcast station.” 47 U.S.C. sec. 522(20). This finding is consistent with our predictions more than five years ago that “[a] 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 Ms. for the Delivery of Video Programming, Notice of Inquiry, 19 FCC Rcd 10909, 10932, para. 74 (2004) (citation omitted).

145 See Cable Act of 1992, Public Law 102–385, sec. 2(a)(5), 106 Stat. 1460, 1461 (“Vertically integrated program suppliers that have the incentive and ability of cable operators to offer their programming to end users over the Internet are also MVPDs—have the incentive and ability to favor their affiliated cable networks to both television viewers and the market”); “increase[ing] the availability of satellite broadcast programming to impede competition from the then-nascent DBS industry.” 146 NCTA has noted that “[t]he Commission could * * * [be] required to consider changes in the DBS market” if 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).

147 DISH Reply at 4–5 (“‘Pay-TV services continue to evolve at a rapid pace as 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’” (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.”)

148 Id. at 5–8 & n. 20 (distinguishing “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-network.com/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 customers’ ‘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 by section 628(b). The Commission therefore is authorized to adopt open Internet rules under Section 628(b), (c)(1), and (j). 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. 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. 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).

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. 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.” 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.

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.” 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 franchisor would be unable to accommodate Star’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.

153 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, 532 F.3d at 475.

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 that applies to 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(d) (“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. AT&T PN Reply at 32. AT&T asserts that winners of 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.\footnote{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 licensees, the Commission must make findings as to additional legislation which the
Congress.\footnote{163}{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).}

\footnote{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 (“Section 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).} The Commission has previously relied on Section 4(k), among other provisions, as a basis for its authority to gather information.\footnote{165}{See e.g., New Part 4 of the Commission’s Rules Concerning Disruptions to Comm’ns. Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830, 16837, paras. 1, 12 (2004) (extending the 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 recertification 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)).} The Commission has316.\footnote{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”].} diminishing any reliance interest they might assert.\footnote{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.”\footnote{162}{The Commission has}
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.\(^{171}\)

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.\(^{172}\)

The regulations in this Order are triggered by a broadband provider offering broadband Internet access service, not by the message of any provider. Indeed, 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.\(^{173}\)

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.”\(^{174}\) 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 allegedly 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) (“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 * * *”).

\(^{169}\) No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by others.

\(^{170}\) To be sure, broadband providers maintain that they are simply conduits of information provided by others.

\(^{171}\) The regulations in this Order are triggered by a broadband provider offering broadband Internet access service, 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.

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\(^{172}\) 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 citations omitted). See also FCC v. Nat’l Citizens Comm. for Broad., 436 U.S. 775, 795 (1978) (NCBA) (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.¹³⁴

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, 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.¹³⁶ 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.¹³⁷

Should issues develop that are not resolved through private processes, the Commission will provide backstop mechanisms to address such disputes.¹³⁸ 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.¹³⁹

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 procedures 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.¹⁴⁰ Although similar to the

¹³⁴ 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 communications.” 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.

¹³⁶ 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).

¹³⁷ 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; Quest Reply at 32.

¹³⁸ 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.

¹³⁹ 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).

¹⁴⁰ 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.\textsuperscript{185}

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.\textsuperscript{186} 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.\textsuperscript{187} 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 \textit{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 \textit{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.\textsuperscript{188}

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.\textsuperscript{189}

\section{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.

\section{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.

\section{Procedural Matters}

\subsection{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
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.

Throughout, it is 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
central 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 6, 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 incorporating 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 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 applies 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.” Thus, we estimate 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. 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 services. 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 have 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 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.

**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 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, 1,005 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 size standards (i.e., meets the pertinent small business size standard (e.g., a telephone communications
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 and won 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 33 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 licensed implemented authorization 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 $15 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 $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 Licenses.** 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. An auction of 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 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 licenses 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 Broadcast 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 46 successful bidders obtaining licenses associated 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.

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 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.

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 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, 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


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.
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.

§ 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.
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.

(e) 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 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) (i) The Commission may request 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
§ 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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