

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

146. Accordingly, we propose the following new rule:

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

147. We seek comment on our conclusions and on the specific wording of this proposed rule. We also seek comment on instances in which broadband Internet access service providers have or may in the future need to facilitate the needs of public safety or national or homeland security, including in ways that, in the absence of the exception proposed in this section, might conflict with the rules we propose today. We reiterate our desire for specific examples and data regarding these issues.

G. Managed or Specialized Services

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

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

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

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

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

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

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

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

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

H. Applicability of Principles to Different Broadband Technology Platforms

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

²⁶⁷ See Douglas A. Kerr, *The AT&T U-verse Service* (Jun. 5, 2009), <http://pumpkin.annex.home.att.net/articles/U-verse.pdf>; Steve Kim, *The Problem with AT&T's U-Verse*, EngadgetHD.com (Dec. 18, 2007), <http://www.engadgethd.com/2007/12/18/the-problem-with-atandts-u-verse/>; Carol Wilson, *Reporter's Notebook*, Telephony Online (Oct. 26, 2007), http://telephonyonline.com/broadband/technology/telcotv_att_averse_102607/.

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

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

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

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

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

²⁶⁹ See *supra* para. 33.

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

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

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

1. Emergence of Mobile Internet Access

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

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

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

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

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

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

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

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

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

2. Background of Wireless Open Platforms

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

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

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

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

²⁸¹ *Id.* at 15365, para. 206.

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

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

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

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

3. Application of the Internet Principles to Wireless

a. Connection to the Network and Device Attachment

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

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

²⁸⁵ Press Release, Verizon Wireless, Verizon Wireless To Introduce “Any Apps, Any Device” Option For Customers In 2008 (Nov. 27, 2007); *see also* Verizon Wireless, Open Development, <https://www2.verizon.com/opendev/> (last visited Oct. 21, 2009).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

²⁹⁴ See *supra* sections IV.H.1–2.

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

I. Enforcement

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

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

J. Technical Advisory Process

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

V. PROCEDURAL MATTERS

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

²⁹⁵ 47 U.S.C. § 503(b).

²⁹⁶ *Id.* at § 403.

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

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

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

³⁰⁰ 47 C.F.R. § 1.711 *et seq.*

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

³⁰² 47 C.F.R. §§ 1.200 *et seq.*

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

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

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

³⁰³ See 47 C.F.R. § 1.1206(b)(2).

³⁰⁴ 47 C.F.R. § 1.1206(b).

³⁰⁵ 47 C.F.R. §§ 1.415, 1.419.

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

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

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

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

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

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

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

³⁰⁷ See 5 U.S.C. § 603.

³⁰⁸ Pub. L. No. 104-13.

³⁰⁹ Pub. L. No. 107-198.

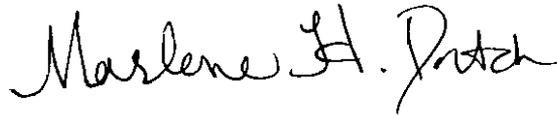
³¹⁰ See 44 U.S.C. § 3506(c)(4).

VI. ORDERING CLAUSES

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

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

FEDERAL COMMUNICATIONS COMMISSION

A handwritten signature in black ink that reads "Marlene H. Dortch". The signature is written in a cursive, flowing style.

Marlene H. Dortch
Secretary

APPENDIX A

Draft Proposed Rules for Public Input

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

PART 8 – PRESERVING THE OPEN INTERNET

Sec.

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

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

§ 8.1 Purpose and Scope.

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

§ 8.3 Definitions.

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

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

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

Reasonable network management. Reasonable network management consists of:

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

§ 8.5 Content.

Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from sending or receiving the lawful content of the user's choice over the Internet.

§ 8.7 Applications and Services.

Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from running the lawful applications or using the lawful services of the user's choice.

§ 8.9 Devices.

Subject to reasonable network management, a provider of broadband Internet access service may not prevent any of its users from connecting to and using on its network the user's choice of lawful devices that do not harm the network.

§ 8.11 Competitive Options.

Subject to reasonable network management, a provider of broadband Internet access service may not deprive any of its users of the user's entitlement to competition among network providers, application providers, service providers, and content providers.

§ 8.13 Nondiscrimination.

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

§ 8.15 Transparency.

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

§ 8.19 Law Enforcement.

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

§ 8.21 Public Safety and Homeland and National Security.

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

§ 8.23 Other laws.

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

APPENDIX B

List of Commenters

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

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

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

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

Reply Commenter

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

Abbreviation

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

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

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

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

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

Reply Commenter**Abbreviation**

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

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

APPENDIX C

Initial Regulatory Flexibility Analysis

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

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

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

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

3. The Commission also proposes draft language to codify a fifth principle that would require a broadband Internet access service provider to treat lawful content, applications, and services in a nondiscriminatory manner and draft language to codify a sixth principle that would require a broadband Internet access service provider to disclose such information concerning network management and other practices as is reasonably required for users and content, application, and service providers to enjoy the protections specified in this rulemaking.

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

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

² See 5 U.S.C. § 603(a).

³ *Id.*

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

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

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

B. Legal Basis

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

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

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

1. Total Small Entities

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

⁵ 5 U.S.C. § 604(a)(3).

⁶ 5 U.S.C. § 601(6).

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

⁸ 15 U.S.C. § 632.

⁹ See 5 U.S.C. §§ 601(3)–(6).

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

¹¹ 5 U.S.C. § 601(4).

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

2. Internet Access Service Providers

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

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

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

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

¹³ 5 U.S.C. § 601(5).

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

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

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

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

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

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

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

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

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

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

3. Wireline Providers

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

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

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

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

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

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

²⁶ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

²⁷ 5 U.S.C. § 601(3).

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

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

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

4. Wireless Providers

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

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

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

³⁰ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

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

³² TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

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

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

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

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

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

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

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

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

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

(Continued from previous page)

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

³⁷ *Id.*

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

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

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

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

⁴² *Id.*

⁴³ TRENDS IN TELEPHONE SERVICE, tbl. 5.3.

⁴⁴ *Id.*

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