

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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

To The Commission and the Media Bureau

REPLY COMMENTS OF CATHERINE J.K. SANDOVAL,
ASSOCIATE PROFESSOR OF LAW, SANTA CLARA UNIVERSITY,
ASSOCIATE DIRECTOR, BROADBAND INSTITUTE OF CALIFORNIA

April 26, 2010

Table of Contents

I. Introduction: Evidence Supporting the Need for Regulation to Preserve an Open, Vibrant and Competitive Internet.....	3
II. FCC Jurisdiction to Regulate Wireless ISPs in the Public Interest under Title III of the Communications Act and Ancillary Jurisdiction to Protect Against Unfair Competition and Consumer Deception.....	8
III. Wireless ISP Limits on “Unlimited” Internet Service and Excessive Use Policies for the Bandwidth Cap Model.....	15
A. Where Unlimited Means Limited.....	16
1. Application Prohibitions: P2P, VoIP, and Internet Content Limits.....	17
2. “Unlimited” Internet Access Plans Subject to Excessive Use Limits.....	25
B. Wireless ISPs with Bandwidth Limits and “Excessive Use” Prohibitions.....	35
III. Cable ISPs, FIOS and U-Verse and DSL Promises and Practices.....	43
1. Cable ISP Internet Access Promises and Contractual Limits.....	43
2. AT&T DSL, Frontier DSL, U-Verse and Verizon FIOS Promises and Practices.....	51
V. Deceptive Broadband Promises and Practices and the Digital Divide.....	54
VI. Conclusion.....	60

Summary

This Reply Comment provides evidence, analysis and specific examples that illuminate the need for FCC rules to protect public access to the Internet and the Internet's open character. It compares leading wireless, wireline, and cable ISP advertising promises to their Terms of Service and Acceptable Use Policies. Most wireless ISPs advertise "Unlimited" Internet or data access, but in separate documents, displayed in fine print, accessible only through cyber-savvy searches, limit service to an undefined level of "excessive use." Wireless ISPs commonly ban the legal use of Peer-to-Peer, while some bar Voice Over Internet Protocol. One wireless ISP bans downloading categories of internet content such as movies, music, and games. The contradictions between Internet service advertised and the actual service provided contributes to the digital divide. Alleged violations of vaguely defined excessive use policies, surcharges on "Unlimited" use, and poor disclosure policies may lead to loss of Internet or other communications services.

The market has replicated and propagated these practices, leaving consumers with few meaningful choices to access a broad range of Internet content. The FCC should exercise its direct jurisdiction over wireless ISPs that provide spectrum-based services to find that advertising Internet service as unlimited, yet imposing material restrictions on legal use, violates the Communications Act and disserves the public interest. While the FCC considers recommendations to reinstitute common carrier regulations under Title II of the Communications Act, the FCC can and should invoke its ancillary jurisdiction to protect competition between communications media and to protect communications consumers.

The filers ask that the FCC accept these late-filed comments due to Internet access and production problems that delayed their submission.

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

REPLY COMMENTS OF CATHERINE J.K. SANDOVAL,
ASSOCIATE PROFESSOR OF LAW, SANTA CLARA UNIVERSITY,
ASSOCIATE DIRECTOR, BROADBAND INSTITUTE OF CALIFORNIA¹

I. Introduction: Evidence Supporting the Need for Regulation to Preserve an Open, Vibrant and Competitive Internet

¹ Thanks to Santa Clara Law (SCU) students Michelle Schaefer, J.D. 2010 and to Gulomjon Azimov, J.D. 2011 for their excellent research assistance and work on these comments. Thanks to SCU Professor Allen S. Hammond, IV and SCU students Hannah Poteat, J.D. 2011 and Paul Goodman, L.L.M. 2011 for their comments on this submission.

These Reply Comments discuss Professor Sandoval's analysis of wireless, cable and wireline-based Internet Service Provider (ISP) descriptions on their web sites of the scope and breadth of Internet service advertised — whether touted as “Unlimited,” sold based on set bandwidth consumption limits, or undefined — as compared to the restrictions set forth in the ISP's Terms of Service (TOS) and Acceptable Use Policy (AUP). This analysis reveals that particularly in the wireless Internet market, many ISPs advertise their service as providing “Unlimited” Internet or data access. Nonetheless, many wireless ISP TOS and AUP documents prohibit the use of Internet protocols such as Peer-to-Peer (P2P) or Voice Over Internet Protocol (VoIP), or proscribe downloading or uploading certain types of content such as movies or games.

Those restrictions are often communicated through separate documents, displayed in fine print, many of which are accessible only through trails and clues worthy of a cyber-savvy Indiana Jones. The widespread disjunction between ISP promises and practices, particularly among wireless ISPs, demonstrates that the market alone will not preserve access to Internet content and the ability to access and share content through a variety of applications. Indeed, the market has replicated and propagated these practices. The resulting market distortions leave consumers with few meaningful choices to access a broad range of Internet content.

Cable-based ISP Charter Communications opposed many of the FCC's net neutrality proposals on the grounds that ISP discrimination against Internet protocols and content are rare.²

² Charter Communications, Comments of Charter Communications, In the Matter of Preserving the Open Internet, Broadband Industry Practices i, 5 (GN Docket No. 09-191) (arguing that there is “scant evidence of abuse by broadband network providers” and that the FCC's Open Internet proceeding “refers to two isolated incidents (one occurring in 2005 and the other in 2007), both of which involved challenged conduct that was resolved quickly and effectively.”) [hereinafter Charter, FCC Comments]. The German Max Planck Institute tested P2P interference among global Internet users and found that 54% of Cox broadband subscribers and 62% of Comcast Internet subscribers found their attempts to use P2P were blocked in 2008. Max Planck Institute for Software Systems, Glasnost: Results from Tests for BitTorrent Traffic Blocking, <http://broadband.mpi-sws.org/transparency/results/> (last visited Oct. 3, 2009). The Max Plank Institute found that ISP interference with P2P was common in early 2008, although it declined as the FCC's investigation into Comcast proceeded. *Id.*, at §5. These findings show that ISP discrimination against Internet applications is not rare or limited to two isolated instances. The small number of

MetroPCS argued to the FCC that “(i)n the current competitive environment, any regulation – especially regulation that assumes harm where none can be found- puts the cart before the horse.”³ This study finds that wireless ISP restrictions on Internet applications are common and now dominate the wireless broadband marketplace.

While many mobile broadband carriers portray their Internet offerings as “Unlimited,” those who disclose their cap or the boundaries of their “excessive use policies,” restrict subscribers to approximately 5 Gigabytes (GB) of data a month.⁴ The FCC found that the average American user of a fixed connection consumes 9 gigabytes of data per month over that connection...with some heavy users consuming upwards of 1,000 GB or more each month. Total data use per fixed residential connection is growing quickly, by roughly 30% annually.”⁵

Satellite “fair use” policies impose dramatically lower ceilings on monthly broadband use, offering Internet access services with monthly data caps ranging from 7,500 megabytes (MB) per month to 17,000 MB per month for WildBlue Satellite.⁶ Hughes Net Satellite Internet bars more than “fair share” use, setting daily limits on downloads or uploads.⁷ Comcast informs

formal complaints to the FCC likely reflects ISP insistence that their contractual limits allow them to terminate or suspend subscriber contracts or impose surcharges, despite promises of broader access.

³ Comments of MetroPCS at 16, In the Matter of Preserving the Open Internet, Broadband Indus. No. 09-191 (Fed. Commc’ns Comm’n (Jan. 14, 2010) [hereinafter MetroPCS Comments].

⁴ See *infra* Section III; See Reply Comments of Broadband Institute of California and Broadband Regulatory Clinic, In the Matter of Preserving the Open Internet, Broadband Indus. No. 09-191 (Fed. Commc’ns Comm’n, April 26, 2010) [hereinafter BBIC/BRC Reply Comments] (citing Larry Dignan, Wireless data caps: Are usage based pricing schemes here to stay?, ZDNet.com (March 10, 2009), <http://blogs.zdnet.com/BTL/?p=14097>; Portia Krebs, *Connected Americans Among World Leaders in Internet Use*, Dec. 22, 2009, <http://www.ustelecom.org/News/NewsItem/Connected-Americans-Among-World-Leaders-in-Internet-Use.html> (reporting that the average American Internet user consumes 14.25 GB per month)).

⁵ Federal Communications Commission, NATIONAL BROADBAND PLAN section 3.1, available at <http://www.broadband.gov/plan/3-current-state-of-the-ecosystem/> (last visited April 24, 2010).

⁶ BBIC/BRC Reply Comments, *supra* note 6, at 18 (citing *Wild Blue Adds More Capacity*, BROADBANDDSLREPORTS.COM (Aug. 11, 2009), <http://www.dslreports.com/shownews/WildBlue-Adds-More-Capacity-103893>).

⁷ HughesNet, Frequently Asked Questions, http://www.nationwidesatellite.com/HughesNet/service/hughesnet_faq.asp#19 (last visited Oct. 3, 2009).

users that downloading one high-definition movie may consume 6 GB of bandwidth.⁸

Downloading one high-definition movie would exceed the stated or unstated bandwidth limits (regardless of whether the Internet service is billed as “Unlimited”) for each of these wireless and Satellite ISPs.

For users who want to use the average amount of bandwidth consumption for fixed ISPs of 9 gigabytes of data, their only choice is DSL or cable. For more than 20% of Americans, both choices are not available to them. The FCC reported in 24.2% of U.S. Zip Codes in 2008, there were DSL subscribers but no cable-modem high-speed Internet subscribers.⁹ In 4.2% of Zip Codes the converse was true; there were cable-modem high-speed Internet subscribers and no DSL subscribers.¹⁰

This limited state of competition for high-speed Internet access at average monthly bandwidth consumption rates means that consumers cannot respond to ISP practices merely by switching. This Reply Comment’s analysis of ISP promises and practices finds that many ISPs adopt the same practice of portraying their Internet access as boundless or subject to undefined “excessive use” policies, and that consumers cannot navigate around these practices by exercising their choice between carriers.

Limited competition and the prevalence of deceptive policies indicate that the conflict between deceptive marketing and restrictive terms of use cannot be addressed through transparency policies alone. It is important to make sure that consumers clearly understand what they are paying for, and that they receive what they paid for. Yet, disclosure alone will not create

⁸ Comcast, Comcast.net security, [hereinafter *Comcast Bandwidth Guidelines*], <http://security.comcast.net/get-help/faq-full.aspx?guid=00a2862a-33e2-474f-8d1f-c6dcc5ef02a9> (last visited April 24, 2010).

⁹ Indus. Analysis & Tech. Bureau, FCC, High-Speed Service for Internet Access: Status as of June 30, 2008 n.9 (2009) [hereinafter FCC 2008 High-Speed Internet Access Report], *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292191A1.doc.

¹⁰ *Id.*

an open Internet or remove incentives to discriminate against Internet content or applications that may compete with vertically integrated ISPs who also offer voice or video services.

This problem is not created merely through an exercise of “market power” in the sense of dominance of any carrier in an ISP market or submarket. ISPs have unique role and power to control Internet use.¹¹ These practices are replicated by many carriers, leaving consumers with no meaningful choices. This conduct obscures competition between carriers who do not openly compete based on the breadth of Internet access offered.

This Reply Comment also notes that deceptive marketing practices and unfair competition are tied to the digital divide, resulting in what the Social Sciences Research Council (SSRC) characterized as Internet “un-adoption” and general distrust of ISPs.¹² Lured by ISP claims that the Internet service offered is “Unlimited,” subscribers may purchase Internet service, only to find that the ISP interprets the consumer’s use to violate ISP policies. Once subscribers run afoul of ISP contract interpretations that contradict their advertising, vague excessive use ceilings, or incur surcharges for excessive use of “Unlimited” Internet or data access, some subscribers may lose their Internet service, as well as their phone service if the Internet and telephone service are bundled. This cycle not only contributes to the digital divide for Internet access, it may also reduce access to other telecommunications and cable-video services due to negative credit reports and bundled products.

¹¹ Paul Ohm, *The Rise and Fall of Invasive ISP Surveillance*, 2009 U. ILLINOIS L. REV. 1417 (2009) (“an ISP is the only point on the network that sits between a user and the rest of the Internet.”).

¹² Social Sciences Research Council (SSRC), Dharma Dailey, Amelia Byrne, Joe Karaganis and Jaewon Chung, BROADBAND ADOPTION IN LOW-INCOME COMMUNITIES, 31 (March 2010), *available at* <http://www.ssrc.org/publications/view/1EB76F62-C720-DF11-9D32-001CC477EC70/>.

II. FCC Jurisdiction to Regulate Wireless ISPs in the Public Interest under Title III of the Communications Act and Ancillary Jurisdiction to Protect Against Unfair Competition and Consumer Deception

For non-wireless ISPs, the FCC's decision to reclassify them as "information service" providers leaves the FCC to rely on its ancillary jurisdiction authority for any regulations of their conduct. The Supreme Court recognized that the FCC reserved ancillary jurisdiction to regulate ISPs.¹³ The D.C. Circuit's decision in *Comcast v. FCC* called into question the FCC's assertion of its ancillary authority over cable-based ISPs.

The BBIC and the Broadband Regulatory Clinic have argued in concurrently filed comments that the FCC should reclassify ISPs as common-carriers in light of changed market conditions that indicate such regulation is necessary to promote a competitive Internet service market.¹⁴ The BBIC and the Broadband Regulatory Clinic also refer to this Reply Comment's analysis of FCC direct jurisdiction over wireless ISPs under Title III of the Communications Act of 1934, as amended by the Telecommunications Act of 1996.¹⁵

The Supreme Court's 2007 decision in *NCTA v. Brand X and FCC*¹⁶ affirmed the FCC's decision to classify cable-modem-based ISPs as "information service" providers, rather than as common-carriers. Shortly after the *NCTA v. Brand X and FCC* decision, the FCC reclassified wireless broadband Internet access as an "information service" under the Communications Act of 1934,¹⁷ along with other forms of broadband internet access such as broadband over wireline, satellite, and powerlines.¹⁸

¹³ Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 996 (2005) ('the Commission remains free to impose special regulatory duties on facilities-based ISPs under its Title I ancillary jurisdiction.').

¹⁴ BBIC/BRC Reply Comments, *supra* note 6, at 22, 38.

¹⁵ See 47 U.S.C. § 303.

¹⁶ *NCTA v. Brand X*, 545 U.S. 967 (2005).

¹⁷ In the Matter of Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks, 22 F.C.C.R. 5901 (2007) [hereinafter *Wireless Internet Regulation*].

¹⁸ Press Release, FCC, FCC Classifies Wireless Broadband Internet Access Service as an Information Service (March 22, 2007), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-271695A1.pdf; Press

In its 2007 decision to reclassify wireless ISPs as information service providers, rather than “common carriers,” the FCC determined that the licensing and other rules governing use of spectrum for *wireless* ISPs would continue to apply.¹⁹ The FCC need not resort to ancillary jurisdiction to regulate wireless ISPs as it specifically reserved direct jurisdiction over wireless ISPs under Title III’s licensing conditions and rules.²⁰

The radio spectrum has long been recognized as a scarce resource, and the Communications Act mandated that any spectrum licensing and rules serve the “public Interest, convenience and necessity.”²¹ In the FCC’s order reclassifying wireless broadband ISPs as information service providers the FCC emphasized that wireless ISPs use the radio spectrum and remain subject to Title III obligations:

Title III generally provides the Commission with authority to regulate “radio communications” and “transmission of energy by radio.”²² Among other provisions, Title III gives the Commission the authority to adopt rules preventing interference and allows it to classify radio stations.²³ It also establishes the basic licensing scheme for radio stations, allowing the Commission to grant, revoke, or modify licenses.²⁴ Title III further allows the Commission to make such rules and regulations and prescribe such restrictions and conditions as may be necessary to carry out the provisions of the Act.²⁵ Application of provisions governing access to and use of spectrum (and their corresponding Commission rules) is not affected by whether the service using the spectrum is classified as a telecommunications or information service under the Act. Accordingly, our decision today to classify wireless broadband Internet access services as information services does not affect the applicability of Title III provisions and corresponding Commission rules to these services. Further, nothing in this order should be construed as modifying any

Release, FCC, FCC Classifies Broadband Over Power Line-Enabled Internet Access as “Information Service” (Nov. 3, 2006), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-268331A1.pdf.

¹⁹ *Wireless Internet Regulation*, *supra* note 17, at 5914-5915.

²⁰ *Id.*, at 5914-5915.

²¹ 47 U.S.C. § 303. *See also* NBC v. U.S., 319 U.S. 190, 215 (1943).

²² *See* Title III - Provisions Relating to Radio, 47 U.S.C. §§ 301 et seq. *See also* *IP-Enabled Services NPRM*, 19 FCC Rcd at 4918.

²³ 47 U.S.C. §§ 302, 303.

²⁴ 47 U.S.C. §§ 307-309, 312, 316.

²⁵ 47 U.S.C. § 303(r). *See, e.g.*, Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, CC Docket No. 94-54, *Memorandum Opinion and Order on Reconsideration*, 14 FCC Rcd 16340, para. 27 (1999) (used the Commission’s licensing authority under Title III to extend resale requirements to enhanced services provided by CMRS carriers).

spectrum use authorizations and service rule obligations arising out of license conditions or rules governing unlicensed use of the spectrum.²⁶

Thus, the FCC emphasized that wireless broadband services are subject to the requirements of Title III with regard to spectrum licensing, authorization, and service rules.

The fundamental principle for FCC spectrum licensing is the mandate that the FCC ensure that spectrum is used in the “public interest, convenience, and necessity.”²⁷ Although wireless ISPs are regulated as “information services,” they remain subject to the conditions of their licensing and spectrum-based service rules including the public interest mandate.²⁸ The FCC’s reclassification Order rejected the proposition that it can only regulate wireless ISPs under the doctrine of ancillary jurisdiction.²⁹ The FCC retains direct jurisdiction to regulate wireless ISP practices that harm consumers and competition, and do not serve the public interest.

In its 2007 reclassification order, the FCC decided not to classify wireless broadband services as a “commercial mobile radio service” (CMRS) under Title III, Section 332, which requires that providers of commercial mobile service be treated as common carriers under Title II of the Act.³⁰ Section 332 authorizes the FCC to “forbear from applying most Title II provisions if it makes certain findings.”³¹ The FCC emphasized that this reclassification did not, however, remove the Title III obligations from wireless broadband services which use the spectrum and are regulated directly by the FCC as spectrum-based services.

²⁶ *Wireless Internet Regulation*, *supra* note 17, at 5914-5915.

²⁷ 47 U.S.C. § 303.

²⁸ *Id.*

²⁹ *See Brand X*, 545 U.S. at 976 (describing the FCC’s ancillary jurisdiction authority); *Comcast v. FCC*, D.C. Circuit, No. 08-1291, 3 (2010) (available at <http://pacer.cadc.uscourts.gov/common/opinions/201004/08-1291-1238302.pdf>) (describing the FCC’s ancillary jurisdiction authority).

³⁰ 47 U.S.C. § 332(c)(1). MetroPCS emphasizes that Section 332 directs the FCC to reduce the regulatory burden upon spectrum users...and to “encourage competition and provide services to the largest feasible number of users.” MetroPCS, FCC Comments, *supra* note 3, at 8 (citing 47 U.S.C. § 332(a)(2) (emphasis added by MetroPCS) and 47 U.S.C. § 332(a)(3). These observations fail to acknowledge that Section 332 governs CMRS services, a classification that no longer governs wireless ISPs per the FCC’s 2007 Wireless Internet Regulation order. *Wireless Internet Regulation*, *supra* note 17, at 5914-5915.

³¹ *Id.*

Many wireless ISPs offer both “telephone” service as a “commercial mobile radio service” common-carrier under Section 332, and wireless broadband internet services regulated under Title III. These bundled services may lead to disconnection of both Title II CRMS voice services and Internet services for alleged subscriber violations of the AUP or TOS policies for the Internet service or for surcharges imposed for “excessive” data use of the “Unlimited” Internet service.

The Social Science Research Council found that ISP billing problems based on misunderstandings about the service and its costs were the second leading cause of loss of Internet service after subscriber income fluctuation.³² Subscribers who lose their Internet service because of billing issues may also lose their wireless telephone service. Subscribers sent to collections for not paying additional charges for data use they believed was unlimited based on ISP advertisements will likely have a negative credit report. The resulting lower credit score may affect their ability to get other wireless telephone or ISP service, as well as cable, DSL or satellite video or telephone service. In this manner, wireless ISP practices affect the ability of consumers to secure other services regulated under the Communications Act.

In addition to evaluating proposed Open Internet rules under the FCC’s direct jurisdiction over wireless ISPs, and considering the BBIC/BRC clinic proposal to reclassify ISPs under Title II, the FCC should also evaluate its theories for ancillary jurisdiction over non-wireless ISPs. Ancillary jurisdiction must be based on: 1) the FCC’s regulation of communications by wire or radio, and 2) the regulation must further “the FCC’s recognized substantive powers over common carriers, spectrum licensees, or cable television.”³³ The D.C. Circuit recognized that the first part of the test was satisfied in that regulation of ISPs such as Comcast involved

³² SSRC, *supra* note 12, at 8.

³³ James B. Speta, *The Shaky Foundation of the Regulated Internet*, 8 J. TELECOMM. & HIGH TECH. L. 101, 112 (2010); *Comcast v. FCC*, No. 08-1291 (D.C. Cir. 2010).

communication by wire, falling within the FCC's express jurisdiction.³⁴ The D.C. Circuit found that the FCC had not satisfied the second part of the test.

The Communications Act codifies regulatory authority, divided by the means of communication: Title II common carriers, Title III radio communication and Title VI cable television. The FCC's express authority is grounded in delegation of power to regulate these classes of communications media, as well as in the parts of Section I of the Communications Act which establish the FCC, its purposes, powers and duties.

This comment argues that the FCC's ancillary jurisdiction over ISPs can be based on the FCC's duty to regulate ISP practices that compete with, interconnect with, and affect spectrum-based services, common-carriers, and cable video services. Misrepresentations by ISPs about the type and extent of Internet service offered affects competition between ISPs using different media, including spectrum-based ISPs. Deceptive practices can also undermine spectrum-based services such as broadcast and CMRS services, common carriers, and cable-based video.

This conception of ancillary jurisdiction mirrors the concern about protecting broadcast services from potentially anti-competitive conduct by nascent cable companies upheld in *Southwestern Cable*.³⁵ Over the past two years, over 800,000 U.S. households have cancelled their cable-video, satellite or telco video service and now rely on the Internet for video.³⁶ If people are seduced into canceling regulated services by ISP representations of "Unlimited" Internet or data access or poorly communicated restrictions on their Internet access, those practices invoke ancillary jurisdiction in the same way that regulation of cable service was upheld in *Southwestern Cable* to address unfair competition with regulated broadcast services.

³⁴ Comcast v. FCC, No. 08-1291 (D.C. Cir. 2010).

³⁵ U.S. v. Southwestern Cable Co, 392 U.S. 157, 175 (1968).

³⁶ Erik Shonfeld, Estimate: 800,000 U.S. Households Abandoned Their TVs for the Web, TechCrunch (April 13, 2010), <http://techcrunch.com/2010/04/13/800000-households-abandoned-tvs-web/>.

John Blevins argues for ancillary-jurisdiction “as a competition-promotion doctrine.”³⁷ Professor Blevins observes that “courts generally defer to the FCC’s ancillary regulations when the regulations are designed to facilitate market competition in this context, particularly when the FCC acts to prevent owners of underlying physical facilities from leveraging that control to affect adjacent markets that depend on access to those facilities.”³⁸ Blevins proposes that “courts should uphold exercises of ancillary jurisdiction that promote competition and prevent anticompetitive behavior, primarily where vertical leveraging concerns exist.”³⁹

Lack of market power by any one ISP has not prevented anticompetitive behavior or harms to consumers. Antitrust laws will not find a violation of Section 2 of the Sherman Act without a showing of monopoly power or market power in the case of tying allegations.⁴⁰ The FCC’s classification of all ISPs offering Internet service at a speed over 200 KB in one direction as “High-speed Internet” services, led to a unitary conception of Internet markets based on the single dimension of speed.⁴¹ This over-broad classification persuaded courts to conclude that the ISP market is competitive since no ISP has market power based on that definition.⁴² Thus, the Sherman Act is insufficient to address the harms from anticompetitive or deceptive conduct by firms who do not have market or monopoly power.

The FCC, by contrast, has the authority and duty to ensure that spectrum-based services operate in the public interest and that information services do not engage in unfair competition

³⁷ John Blevins, *Jurisdiction as Competition Promotion: A Unified Theory of the FCC’s Ancillary Jurisdiction*, 36 FLA. STATE U. L. REV. 585, 611 (2009).

³⁸ *Id.*, at 612.

³⁹ *Id.*, at 625.

⁴⁰ Catherine Sandoval, *Disclosure, Deception and Deep-Packet Inspection; The Role of the Federal Trade Commission Act’s Deceptive Conduct Provisions in the Net Neutrality Debate*, 78 Fordham Law Review 641, notes 380-384 and accompanying text (October 2009) (citing *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 406–10 (2004); *Pac. Bell Tel. Co. v. Linkline Commc’ns., Inc.*, 129 S. Ct. 1109 (2009), available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1516705 [hereinafter *Disclosure, Deception and Deep-Packet Inspection*]).

⁴¹ FCC 2008 High-Speed Internet Access Report, *supra* note 9, at 2.

⁴² *Pac. Bell Tel. Co. v. Linkline Commc’ns., Inc.*, 129 S. Ct. 1109.

against other services regulated under Titles II, III and VI of the Communications Act. FCC action is particularly critical when the lack of market power has failed to curb deceptive or anti-competitive practices. Professor Sandoval's article *Disclosure, Deception and Deep-Packet Inspection: The Role of the Federal Trade Commission Act's Deceptive Conduct Provisions in the Net Neutrality Debate*, pointed out that "(a)n examination of the relevant market and proof of market or monopoly power are not prerequisites for an FTC [Federal Trade Commission] Act deceptive practices claim, an FTC Act unfairness claim, or enforcement under the Communications Act and other FCC regulations."⁴³ "...Congress recognized that in transactions in which consumers do not get what they were promised, consumers could be hurt by deceptive and unfair conduct before a firm has monopoly or market power."⁴⁴

Pending consideration of proposals to reclassify ISPs as common carriers, the FCC can exercise its ancillary jurisdiction to address unfair, deceptive or anticompetitive practices under its Title II, III or VI authority under the Communications Act to protect consumers or competition. It can also exercise its direct jurisdiction over wireless ISPs to ensure that spectrum-based licensees serve the "public interest, convenience, and necessity" under their Title III licensing obligations. This comment's analysis of ISP promises and practices supports the contention that FCC ancillary jurisdiction is founded on the need to protect against unfair competition between ISPs and other regulated services with whom they compete and interconnect,⁴⁵ and to prevent consumer deception.

⁴³ Sandoval, *supra* note 40, at n. 114.

⁴⁴ *Id.*

⁴⁵ Kevin Werbach, *Off the Hook*, 95 CORNELL LAW REVIEW 535, 591 (2010).

III. Wireless ISP Limits on “Unlimited” Internet Service and Excessive Use Policies for the Bandwidth Cap Model

The FCC’s *Open Internet NPRM* requested qualitative or quantitative evidence, analysis and specific examples that illuminate whether additional or different rules are necessary to protect public access to the Internet and the Internet’s open character.⁴⁶ To analyze whether market forces have been sufficient to provide internet users including subscribers and Internet application developers with robust and open Internet service and information about the type and extent of Internet access provided, this Reply Comment examines the advertising promises and Terms of Service and Acceptable Use Policies for several wireless ISPs.

This analysis finds that the promise of “Unlimited” Internet or data service is the predominant model for wireless ISPs. Yet, each of those wireless ISPs prohibit “excessive use” without defining what level of use that term permits. Some wireless ISPs ban the use of VoIP, and most bar the use of P2P, regardless of whether it is used to access or distribute content legally.

Verizon is one of the few wireless ISPs to compete based on the bandwidth offered for its wireless phone Internet and data access. Tim Wu’s 2007 article, *Wireless Carterfone*, criticized Verizon for advertising “Unlimited” wireless Internet access, yet imposing secret limits.⁴⁷ Under public scrutiny and an injunction from the New York Attorney General to stop marketing its service as “Unlimited” when it imposed material restriction on Internet use,⁴⁸ Verizon now

⁴⁶ FCC, In the Matter of Preserving the Open Internet, Broadband Industry Practices, 24 FCC Rcd. 13064, ¶81 (GN Docket No. 09-191) (WC Docket No. 07-52) (Oct. 22, 2009) [hereinafter *FCC Open Internet NPRM*].

⁴⁷ Tim Wu, *Wireless Carterfone*, 920 PRACTICING LAW INSTITUTE, PATENTS, COPYRIGHTS, TRADEMARKS, AND LITERARY PROPERTY COURSE HANDBOOK SERIES, 413, 416 (2007).

⁴⁸ INTERNET BUREAU, ATT’Y GEN. OF THE STATE OF N.Y., IN THE MATTER OF VERIZON WIRELESS: ASSURANCE OF DISCONTINUANCE (2007) [hereinafter VERIZON ASSURANCE OF DISCONTINUANCE], available at http://www.oag.state.ny.us/media_center/2007/oct/Verizon%20Wireless%20AOD.pdf (requiring that Verizon cease advertisements describing its Data Access Plan as “unlimited” when it imposed significant limits and requiring restitution to affected consumers); Verizon Wireless, Mobile Broadband Plans for Wireless Internet Access,

markets its Internet service for smartphones as subject to 5 GB monthly bandwidth limits.⁴⁹

Comcast advertises a 5 gigabyte monthly bandwidth limit for its smartcards designed to provide wireless Internet access to computers.⁵⁰

Curiously, many other wireless ISPs now advertise their Internet service as “Unlimited,” but ban legal applications and erect invisible fences around “excessive use.” The “Unlimited” Internet access promise coupled with restrictive terms now prevails in the wireless ISP market, distorting competition, limiting consumer choice, and likely contributing to the digital divide.

A. Where Unlimited Means Limited

AT&T, MetroPCS, T-Mobile, Sprint, and Clearwire advertise some or all of their wireless data and Internet access plans as “Unlimited.” Yet, in separate, often poorly linked or difficult to find terms of service or acceptable use policies, those ISPs impose material limits on Internet use. Their contracts often prohibit use of specific Internet applications, forbid undefined levels of “excessive use,” or ban categories of Internet content such as movies, music or games.

The FCC Act should not permit contractual restrictions to trump advertising claims that were material to the sale. The FCC should take note of the standards of the FTC Act’s deceptive conduct provisions which require clear and conspicuous disclosure, prominently placed in proximity to the advertising claim, to defend against a charge that a contractual limitation is deceptive.⁵¹ The FTC has held that limitations on material representations that induce a

(imposing a 5 gb monthly limit on data use) [hereinafter *Verizon Wireless Plans*], available at: <http://www.verizonwireless.com/b2c/mobilebroadband/?page=plans> (last visited March 30, 2010).

⁴⁹ INTERNET BUREAU, ATT’Y GEN. OF THE STATE OF N.Y., IN THE MATTER OF VERIZON WIRELESS: ASSURANCE OF DISCONTINUANCE (2007) [hereinafter *VERIZON ASSURANCE OF DISCONTINUANCE*], available at http://www.oag.state.ny.us/media_center/2007/oct/Verizon%20Wireless%20AOD.pdf (requiring that Verizon cease advertisements describing its Data Access Plan as “unlimited” when it imposed significant limits and requiring restitution to affected consumers); See *infra* note 171.

⁵⁰ Comcast, High-Speed 2go, <http://www.comcast.com/Corporate/Learn/HighSpeedInternet/high-speed-2go.html> (last visited April 1, 2010).

⁵¹ 15 U.S.C. §§ 41–77; *FTC v. Cyberspace.com LLC*, 453 F.3d 1196, 1199 (9th Cir. 2006); *FTC v. Tashman*, 318 F.3d 1273, 1277 (11th Cir. 2003); *Telebrands Corp.*, 140 F.T.C. 278, 290 (2005), *aff’d*, 457 F.3d 354 (4th Cir.

purchase must be clearly, conspicuously and prominently communicated in close proximity to the material representation.⁵² Restrictions communicated in separate documents, removed from material advertising representations are insufficient under the FTC Act's standards.⁵³

Characterizations of Internet access as "Unlimited," undermined by express or vague restrictions in separate TOS or AUP documents, do not meet the FTC Act's deceptive conduct standards and should not meet the public interest stands of Title III of the Communications Act.

1. Application Prohibitions: P2P, VoIP, and Internet Content Limits

AT&T proclaims that the "Data Plan for the iPhone includes unlimited Data in the U.S."⁵⁴ This promise of "unlimited Data in the U.S." is the only data plan AT&T offers for Apple's iPhone. The claim of "unlimited" data or Internet access does not provide any reference to the prohibited uses of lawful Internet applications listed in its Terms of Service found in a separate document.

AT&T's Wireless Data Terms of Service permits Internet browsing and "most common uses for Intranet browsing, email and intranet access."⁵⁵ AT&T prohibits uses that cause "extreme network capacity issues," including Peer-to-Peer (P2P) file sharing.⁵⁶ The TOS applicable to the iPhone and all AT&T wireless phones provides examples of prohibited activities including "downloading movies using P2P file sharing services," and prohibits plan use to tether the device to personal computers unless the plan is specifically designated for

2006); Cliffdale Assocs., Inc., 103 F.T.C. 110, 164–65 (1984).

⁵² Sandoval, *supra* note 40, at 666-667 (citing FTC, Dot Com Disclosures: Information about Online Advertising (2009), available at <http://www.ftc.gov/bcp/edu/pubs/business/ecommerce/bus41.pdf>).

⁵³ Sandoval, *supra* note 40, at 666 (citing Giant Food, 61 F.T.C. 326, 348 (1962) (fine-print disclaimer was inadequate to correct a deceptive impression). *See also*, FTC, In the Matter of Sears Holdings Management Corp. (Docket No. C-4264) (Aug. 31, 2009), 2009 WL 2979770 (entering consent decree requiring clear and conspicuous disclosures based on finding that information in a separate document available through Internet links was insufficient to communicate the nature of the service offered and its consequences).

⁵⁴ AT&T, Apple iPhone 3GS – 32 GB Cell Phone Package, http://www.wireless.att.com/cell-phone-service/packages/packages-details.jsp?q_sku=sku3790235&q_package=sku3790237 (last visited March 31, 2010).

⁵⁵ AT&T, Plan Terms – Wireless from AT&T, <http://www.wireless.att.com/cell-phone-service/legal/plan-terms.jsp#iPhone> (last visited March 31, 2010).

⁵⁶ *Id.*

tethering.⁵⁷ This provides an example of the disjunction between “Unlimited” Internet service advertised, as compared to the limited service provided. AT&T’s iPhone restriction on P2P use, despite its characterization of its data service as “Unlimited,” is not anachronistic, but a common limitation among supposedly “Unlimited” ISP services.

AT&T markets “Unlimited data” plans for other phones including the Nokia Surge Smartphone featuring a “personal bundle” which “includes Unlimited data” and a “Smartphone personal” plan which “includes Unlimited data.”⁵⁸ For Smartphone plans, AT&T imposes express bandwidth limits of 5GB of data only for its “Smartphone personal with tethering” designed to permit the wireless access to be connected to a computer.⁵⁹ AT&T’s “Plan Terms,” accessible through a link at the bottom of the page describing the phone and not specifically linked to its characterization of the Internet service as “Unlimited,” impose the same limits discussed above that prohibit use of P2P and other uses that cause “extreme network capacity issues.”

In late-2009, one AT&T senior executive complained that heavy video and music users, particularly in New York and the Bay Area of California, were using “too much bandwidth” through their iPhones’ “unlimited data” plans.⁶⁰ A study commissioned by Consumer Reports found that on average, iPhone users consume 273 megabytes (MBs) of data per month, compared to 54 MBs for Blackberry users and 150 MBs for other smartphone users.⁶¹ The study found that

⁵⁷ *Id.*

⁵⁸ AT&T, Nokia Surge Smartphone Package, http://www.wireless.att.com/cell-phone-service/packages/packages-details.jsp?q_package=sku3890248&_requestid=149545 (last visited April 21, 2010).

⁵⁹ *Id.*

⁶⁰ Ryan Singel, *Cap my iPhone? Try this instead AT&T*, WIRED (Dec. 9, 2009), <http://www.wired.com/epicenter/2009/12/iphone-caps/>.

⁶¹ Jeff Blyskal, *Exclusive: iPhones hog much more data than other smart phones*, CONSUMERREPORTS.ORG (Feb. 10, 2010), <http://blogs.consumerreports.org/electronics/2010/02/iphone-data-usage-smart-phones-smartphones-blackberry-mb-network-att-carrier-istress.html> (last visited April 21, 2010). The Consumer Reports bandwidth study was conducted by Validas, a company that provides “wireless bill analysis and optimization services to consumers and businesses.” *Id.*

“12% of iPhone users use at least 500 MBs per month,” while approximately 4% use 1 gigabyte (GB) of data.⁶²

These findings should not be surprising in light of AT&T’s characterization of its iPhone data plan as “Unlimited” and the many video-intensive applications offered through the iPhone. iPhone subscriber use is dwarfed by wireline bandwidth consumption where subscribers log on average 9 GB of bandwidth use per month.⁶³ As discussed in Section V, these differences in bandwidth consumption reflect ISP policies, differences in Internet access devices, and the limits to substitutability for wireline and wireless services.

Likely daunted by the popularity of video and real-time entertainment,⁶⁴ MetroPCS’s Terms of Service prohibit use of its MetroWeb Internet access for “up/downloading or streaming of movies, music and games,” VoIP, and Peer-to-Peer file sharing.⁶⁵ Despite these significant restrictions on broad categories of popular Internet content, MetroPCS advertises its service as offering “Unlimited talk, text, and web.”⁶⁶ MetroPCS was unique among wireless ISPs analyzed in prohibiting large categories of content such as, movies, music and games, without reference to how much bandwidth they consume or the application used to access that content. Though advertised as “your unlimited connection to the Internet using your MetroPCS phone,”⁶⁷ these broad exclusions reign in the breadth of the unbridled Internet service promised.

⁶² *Id.*

⁶³ Federal Communications Commission, NATIONAL BROADBAND PLAN, *supra* note 5, at section 3.1

⁶⁴ Sandvine, Comments, Before the Federal Communications Commission, In the Matter of Preserving the Open Internet, Broadband Industry Practices 2,8 (GN Docket No. 09-191) (finding that North American Internet traffic saw an 80% increase in the use of “Real-Time Entertainment” including video in 2009 over its 2008 bandwidth share, outpacing all other categories).

⁶⁵ MetroPCS, MetroWeb Terms of Use, http://www.metropcs.com/products/metroweb/terms_of_use.aspx (last visited March 31, 2010).

⁶⁶ MetroPCS, <http://www.metropcs.com/> (last visited April 5, 2010).

⁶⁷ MetroPCS, Wireless Service Features from MetroPCS, <http://www.metropcs.com/features.aspx> (last visited March 31, 2010).

MetroPCS does not explain why it included VoIP among the prohibited applications list. MetroWEB's TOS state that its service cannot be used "(ii) with server devices or with host computer applications, including web camera posts/broadcasts, automatic data feeds, VOIP, or file sharing." MetroWEB's TOS do not make it clear if all uses of VoIP are prohibited or only video VoIP.

VoIP is not a bandwidth-intensive application according to deep-packet-inspection (DPI) provider Sandvine.⁶⁸ Sandvine's study of cable and DSL Internet traffic on the ISPs it serves reveals that a VoIP connection requires approximately 16 kilobytes per second (kbps) of bandwidth.⁶⁹ In contrast, sending or receiving an email with a large attachment requires approximately 60kbs.⁷⁰ P2P requires a minimum bandwidth of 195 kbps, while the average normal-definition video on YouTube requires 300kbps, and a high-definition video requires between 1-2 mebibytes per second (mbps).⁷¹ Sandvine's analysis indicates that the ban on VoIP cannot be explained solely by its bandwidth consumption.

This prohibition raises competitive concerns as VoIP is an Internet application that can compete with the voice service MetroWeb offers. In 2005, the FCC "entered into a consent decree with the Madison River telephone company to prohibit the company from blocking consumer access to Voice over Internet Protocol (VoIP) services to make voice "calls" over the Internet, a service which could compete with the telephone company's services."⁷² At the time of the *Madison River* consent decree, the FCC "still classified telephone-based ISPs as common

⁶⁸ Sandvine, *supra* note 62, at 30.

⁶⁹ *Id.*, at 29.

⁷⁰ *Id.*, at 29.

⁷¹ *Id.*, at 29-30.

⁷² Sandoval, *supra* note 40, at 659 (citing Madison River Communications, LLC, 20 F.C.C.R. 4295, 4295, 4297 (2005) (adopting a consent decree to terminate an investigation into the compliance of Madison River Communication, LLC with section 201(b) of the Communications Act of 1934). Section 201(b) requires that for common carriers "[a]ll charges, practices, classifications, and regulations for and in connection with such communication service shall be just and reasonable." 47 U.S.C. § 201(b)).

carriers, subjecting them to rules prohibiting discrimination among traffic carried on a common-carrier network.”⁷³ *Disclosure, Deception and Deep-Packet Inspection*, observed that “(i)f Madison River had been classified as an information service provider, common-carrier nondiscrimination rules would not have governed that case...[and the FCC would have been required] to determine whether Madison River’s conduct violated any other provisions of the Communications Act or other FCC rules or policies, as it did with the complaint against Comcast.”⁷⁴

While some may argue that subscribers should know that Internet applications such as P2P and VoIP are prohibited, particularly on wireless networks, this assertion ignores the popularity of both applications among Internet users and those who wish to legally access and distribute content. Sandvine studied internet traffic on 20 of its cable and Digital Subscriber Line (DSL) ISP clients totaling 24 million subscribers.⁷⁵ Sandvine’s analysis of Internet traffic on its ISP clients in North America found that P2P accounts for 18.5% of Internet traffic, web browsing represented 36.9%, and “Real-Time Entertainment,” which includes watching video through services such as You-Tube, constitutes 26.7%.⁷⁶ The widespread use of P2P and substantially larger amount of bandwidth consumed by North American DSL and cable-Internet subscribers to watch and engage in “Real-Time Entertainment” such as video, does not communicate that subscribers “should know” that P2P or VoIP services such as Skype (which Sandvine found was equally popular with average and top subscribers)⁷⁷ is prohibited in Internet access plans marketed as “Unlimited.”

⁷³ Sandoval, *supra* note 40, at 659.

⁷⁴ *Id.*

⁷⁵ Sandvine, *supra* note 64, at 2.

⁷⁶ *Id.*, at 23-24.

⁷⁷ *Id.*, at 23-20.

Allot Mobile's 2009 Global Mobile Broadband Traffic Report found that worldwide mobile data bandwidth usage increased by 72% during the second half of 2009.⁷⁸ Largely mirroring Sandvine's findings, Allot found that among its mobile broadband clients in the Americas, web-based uses constituted the largest category of wireless Internet traffic, representing 35% of wireless Internet bandwidth consumption.⁷⁹ Streaming applications including video grew by 99% in 2009, indicating that video is the likely Internet application bandwidth tsunami.⁸⁰ Streaming web-based applications including video accounted for 25% of wireless broadband traffic in the Americas in 2009, a share likely to grow significantly.⁸¹ P2P ranked third in bandwidth consumption, accounting for 18% of bandwidth use in the Americas.⁸² Allot noted that Web-based download traffic using HTTP protocol was becoming a viable substitute for P2P file sharing, accounting for 16% of wireless bandwidth consumption.⁸³ P2P consumption was higher in some regions than others. In the top 5% of American cell sites, Allot reported that P2P accounted for 34% of bandwidth use, constituting the largest category of Internet traffic.⁸⁴

P2P is often demonized as an application used to evade copyright laws and exchange illegal downloads, a characterization that ignores its growing use to legally distribute and access content. The FCC's Open Internet NPRM stated that its "draft rules would not prohibit

⁷⁸ PR Newswire, *Allot MobileTrends: Global Mobile Broadband Traffic Report Shows Significant 72% Growth in Worldwide Mobile Data Bandwidth Usage in H2, 2009*, available at: <http://www.prnewswire.com/news-releases/allot-mobiletrends-global-mobile-broadband-traffic-report-shows-significant-72-growth-in-worldwide-mobile-data-bandwidth-usage-in-h2-2009-83792847.html> (last visited April 25, 2010). Allot gathered reports on Internet traffic among its global customers representing 180 million subscribers. *Id.*

⁷⁹ *YouTube 10% of Bandwidth, Facebook Grows, Skype Top VoIP, P2P Congests*, Wireless and Mobile News (Feb. 10, 2010) available at: <http://www.wirelessandmobilenews.com/2010/02/youtube-10-of-bandwidth-facebook-grows-skupe-tops-voip-p2p-congests.html>

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

broadband Internet access service providers from taking reasonable action to prevent the transfer or unlawful content, such as the unlawful distribution of copyrighted works.”⁸⁵ Prohibiting P2P to stop copyright violation is massively over-inclusive, deploying an anvil where more targeted tools are available to detect and deter copyright violation.

Sandvine noted that BitTorrent which uses P2P protocol has gained “increasing mainstream acceptance...many companies rely on the BitTorrent protocol to distribute large software packages for patches, and independent media producers rely on the network to cost-effectively distribute movies and music.”⁸⁶ Mom-and-apple-pie companies such as National Geographic use P2P to legally distribute video.⁸⁷

Under Title III of the Communications Act, the FCC has the jurisdiction to determine whether wireless ISP prohibitions of the use of specific Internet applications including VoIP and P2P serve the public interest.⁸⁸ Such restrictions would violate the net neutrality rules the FCC proposed in its *Open Internet* proceeding as the relatively low bandwidth consumption of VoIP indicates that barring VoIP is not necessary for “reasonable network management.” Sandvine’s study indicates that P2P consumes less bandwidth on cable and DSL Internet services than real-time video, content MetroPCS also prohibits. These prohibitions indicate that MetroPCS forbids use of the two of the top three categories of Internet consumption as measured by Sandvine,⁸⁹ though MetroPCS touts its Internet service as “Unlimited.”

MetroPCS filed comments in the FCC’s *Open Internet* proceeding opposing the FCC’s proposed net neutrality rules on the grounds that the rules would “eliminate the unlimited ‘all-you-can-eat’

⁸⁵ *FCC Open Internet NPRM*, *supra* note 46, at ¶ 16.

⁸⁶ Sandvine, 2009 *Global Broadband Phenomena*, 21 (Jan. 13, 2010), [hereinafter Sandvine, *Global Broadband*], available at: <http://www.sandvine.com/downloads/documents/2009%20Global%20Broadband%20Phenomena%20-%20Full%20Report.pdf> (last visited April 25, 2010).

⁸⁷ See Press Release, Pando Networks, NBC Selects Pando Networks To Power TV Downloads (Feb. 27, 2008), <http://www.pandonetworks.com/node/74>. See Sandvine, *supra* note 62, at 23-24.

⁸⁸ *Wireless Internet Regulation*, *supra* note 17, at 5914-5915.

⁸⁹ See *supra* notes 68-71 and accompanying text.

business models of wireless carriers that are instrumental in providing service to otherwise underserved communities.”⁹⁰ MetroPCS stressed that it offers Internet services where “(c)ustomers pay for service in advance, without a credit check, with service plans beginning as low as \$40 per month, which now include taxes and regulatory fees.”⁹¹ MetroPCS surveys indicate that “a growing percentage of MetroPCS customers use their handset as the primary or sole means to access the Internet.”⁹² For subscribers for whom wireless internet is their primary or exclusive means of Internet access, clear, consistent disclosures of the type and extent of internet service offered is even more critical.

MetroPCS’s comments characterize the FCC’s net neutrality proposals as a “solution in search of a problem.”⁹³ An analysis of MetroPCS’s Terms of Service illustrate ISP policies that limit application use, access to content, and contradict the breadth of Internet access promised, concerns that motivated the FCC’s *Open Internet* proceeding. This rift between advertisements and actual practice underscores the need for regulatory action.

The public does not know how MetroPCS enforces these policies and how it has handled cases where subscribers have treated their Internet service as “Unlimited” and used the prohibited services. The ability to enforce these contract clauses against subscribers, particularly those who rely primarily on wireless services for access to the Internet, highlights the need to ensure that such subscribers receive the range of Internet service which they were promised and for which they paid. The contradiction between the prominent advertising characterization of the service as “Unlimited” and material restrictions in separate contract documents that redefine “Unlimited” as limited is not sufficient to inform consumers about the service they will receive or what they can expect. It does not meet the standards of the FTC Act’s deceptive conduct prohibitions and should not be found to satisfy Title III public interest obligations under the

⁹⁰ Comments of MetroPCS, *supra* note 3, at 9.

⁹¹ *Id.*, at 2.

⁹² *Id.*, at 2-3.

⁹³ *Id.*, at 11.

Communications Act. Particularly those who rely on mobile Internet plans as their sole access to the Internet need better disclosure to determine whether that service will meet their needs.

Similarly, T-Mobile Broadband offers an “Unlimited Talk, Text and Web” Plan.⁹⁴ Yet, T-Mobile’s separate terms and conditions, accessed by clicking on the fifth category under “Legal,” which is the last of four categories at the bottom on the web page advertising unlimited service, prohibits the use of “Peer-to-Peer file sharing applications that are broadcast to multiple servers or recipients.”⁹⁵ The P2P prohibition is found in the 29th heading of the Terms of Service, in a smaller font than the promise of unlimited web access.⁹⁶

2. “Unlimited” Internet Access Plans Subject to Excessive Use Limits

Sprint advertises a mobile plan offering “Everything data with any Mobile,” including “Unlimited data: Web surfing, email, BlackBerry Internet Services, GPS Navigation, Sprint TV and Radio.”⁹⁷ It is not clear whether the uses following the colon after “Unlimited data” are limiters, descriptions of the only uses permitted under the “Unlimited data” plan, or are examples of permitted uses. This distinction is important because P2P applications may be accessed via the web. For example, National Geographic Magazine uses P2P to distribute some of its videos through Pando Networks which can be found on the web, though P2P can also be used as a non-

⁹⁴ T-Mobile, Even More Plus Unlimited Talk, Text, Web, <http://www.t-mobile.com/shop/plans/cell-phone-plans-detail.aspx?rateplan=Even-More-Plus-Unlimited-Talk-Text-Web> (last visited March 30, 2010).

⁹⁵ T Mobile, T-Mobile Terms and Conditions, Effective June 28, 2008, http://www.t-mobile.com/Templates/Popup.aspx?WT.z_unav=ftr__TC&PAsset=Ftr_Ftr_TermsAndConditions&print=true (last visited March 30, 2010) [hereinafter *T-Mobile Terms and Conditions*].

⁹⁶ *Id.*

⁹⁷ Sprint, http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/SubmitRegionAction?isUpgradePathForCoverage=false&currZipCode=&upgradeOption=&nextPage=DisplayPlans&equipmentSKUurlPart=%3FcurrentPage%3DratePlanPage&filterStringParamName=filterString%3DAny_Mobile_Anytime_Filter&newZipCode=95126, last visited April 6, 2010. See also Sprint, http://www.sprint.com/index_c.html, last visited April 6, 2010 (the top frame has rotating advertisements of different plans and offers; one of the advertisements is for “Everything Data plan.”).

web-based service.⁹⁸ The promise of “Unlimited Data” tilts the interpretation toward the reading of the services listed as examples, rather than exclusive categories or permitted use.

Sprint’s advertisement proclaims in bold type in a banner heading across the top of the web page, “Get unlimited text, unlimited Web and unlimited calling to any mobile phone in America for just \$69.99/month.”⁹⁹

Sprint informed the FCC that it “could support a rule granting consumers a right to access content and applications of their choice, provided appropriate network management and consumer protection control is retained.”¹⁰⁰ Sprint argued that carriers should retain the right to block access when necessary so that “a small number of customers in a locality must not be permitted to “hog” so much spectrum at a given point in time that other customers served by the same cell site cannot access their desired content or applications – or even obtain service altogether (e.g., make an E911 call).¹⁰¹ Keeping enough spectrum available for E911 calls is important and E911 access is mandatory. Yet, advertising Internet access as “Unlimited,” then blocking access to content is inconsistent and does not satisfy the Communications Act or FTC Act requirements.

Sprint’s “Acceptable Use Policy and Visitor Agreement,”¹⁰² accessible by clicking onto the bottom of the page describing the “Everything” package including “Unlimited Data,” limits use of Sprint’s Internet service:

Excessive Utilization of Network Resources: Wireless and Wireline networks have capacity limits and all customers can suffer from degraded or denied service when one or

⁹⁸ Press Release, Pando Networks, NBC Selects Pando Networks To Power TV Downloads (Feb. 27, 2008), <http://www.pandonetworks.com/node/74>.

⁹⁹ Sprint, http://www.sprint.com/index_c.html, last visited April 6, 2010 (displaying rotating advertisement banners, so this particular advertising promise is not visible at all times.)

¹⁰⁰ Sprint, Comments of Sprint Nextel Corp., In the Matter of Preserving the Open Internet, Broadband Industry Practices, GN Docket No. 09-191 (Jan. 14, 2010).

¹⁰¹ *Id.*

¹⁰² The link for Sprint’s Acceptable Use Policy and Visitor Agreement is in small type at the bottom of the webpage in a light gray font against a white background, making it difficult to find and read.

a small group of users consumes disproportionate amounts of network resources. Sprint Nextel, therefore, will monitor both overall network performance and individual resource consumption to determine if any user is consuming a disproportionate amount of available resources and creating the potential to disrupt or degrade the Sprint Nextel network or network usage by others. While the determination of what constitutes excessive use depends on the specific state of the network at any given time, excessive use is determined by resource consumption relative to that of a typical individual user of the Service and not by the use of any particular application.¹⁰³

While this policy does not target any specific application, it is impossible for an individual subscriber to know what a “typical individual user of the Service” consumes without more information from the network operator who guards that data.

In 2008 the State of Florida entered into a consent decree with Comcast which in 2003-2004 advertised its cable-based Internet service as “Unlimited” but prohibited “excessive use” in its AUP.¹⁰⁴ The Florida Attorney General averred that “the term “unlimited” in such advertisements could reasonably be interpreted, in the absence of qualifying language, to mean unlimited downloading or bandwidth usage.”¹⁰⁵ Florida filed suit in response to Comcast’s practice of informing its top 1,000 bandwidth users that “they were violating Comcast’s Acceptable Use Policy, because of their excessive bandwidth use.”¹⁰⁶ At the time, Comcast contended that “the bandwidth usage of these top 1,000 residential subscribers is excessive and not characteristic of typical residential use of Comcast’s high-speed Internet service.”¹⁰⁷

The Florida Attorney General “expressed concern that Comcast did not communicate to residential high speed Internet subscribers a fixed limitation on bandwidth usage to enable consumers to know in advance, with great precision, what level of bandwidth usage constituted

¹⁰³ Sprint, Acceptable Use Policy and Visitor Agreement (Effective January 18, 2010), <http://www.sprint.com/legal/agreement.html> (last visited April 4, 2010).

¹⁰⁴ State of Florida, Office of the Attorney General, Department of Legal Affairs, In the Matter of Comcast Corp., Assurance of Voluntary Compliance (A.G. Case No. L07-1132) (2008), [http://myfloridalegal.com/webfiles.nsf/WF/MRAY-7J4RL3/\\$file/ComcastAVC.pdf](http://myfloridalegal.com/webfiles.nsf/WF/MRAY-7J4RL3/$file/ComcastAVC.pdf).

¹⁰⁵ *Id.* at ¶4.

¹⁰⁶ *Id.*, at ¶5.

¹⁰⁷ *Id.*

excessive usage and would place them in violation of the excessive use restrictions contained in Comcast's Acceptable Use Policy."¹⁰⁸ The Florida Attorney General contended that Comcast did not "sufficiently disclose in a clear and conspicuous manner to the consumer the amount of bandwidth that it deemed to be excessive."¹⁰⁹ Neither did ranking among the top 1,000 of residential users communicate to users how much bandwidth they could use under their Internet access plans.¹¹⁰

The Florida suit indicates that ISP suspension or termination of subscribers for violation of "Excessive Use" policies may violate state deceptive conduct and unfair competition laws since those vague policies do not sufficiently inform consumers about the limits on their service.¹¹¹ These undefined ceilings on "Excessive Use" are not only impossible for subscribers to know, Sandvine notes that Internet users "have traditionally not been able to monitor their use of the network to understand their impact."¹¹² Suspending or terminating Internet access under vague "excessive use" policies is inconsistent with the FTC Act's deceptive conduct prohibitions and the Communications Act's public interest mandate for spectrum-based services, particularly when the Internet service offered is advertised as "Unlimited."

In 2008, during the FCC's investigation of Comcast's interference with subscriber use of P2P applications, Comcast switched to a bandwidth usage cap limit of 250 gigabytes (GB) per month, although applications may still be slowed during times of congestion, irrespective of whether the subscriber has reached her 250 GB limit.¹¹³ AT&T, MetroPCS, T-Mobile, Sprint

¹⁰⁸ *Id.*, at ¶6.

¹⁰⁹ *Id.*, at ¶7.

¹¹⁰ *Id.*

¹¹¹ *Id.*, at 7 (citing Chapter 501, Part II, Florida Statutes (2007), the Florida Deceptive and Unfair Trade Practices Act).

¹¹² Sandvine, *supra* note 64, at 6.

¹¹³ Sandoval, *supra* note 40, at n. 281-286 and accompanying text. Professor Wu's 2003 study of Cable-Internet and DSL contracts revealed that 100% of the cable-ISPs surveyed restricted "overuse of bandwidth," as did DSL

and Clearwire advertise their wireless data and Internet access as “Unlimited,” but impose “excessive use” prohibitions. Although it is certainly true that ISP networks have capacity limits and that each subscriber’s use of shared networks such as mobile, satellite, and cable-based Internet networks affects the capacity available to other users, network management policies must be consistent with the material promises that induced the sale. The FCC should adopt the FTC Act’s requirements that these limits must be made clear at the outset, in prominence proportionate to the material representation(s) that induced the transaction.¹¹⁴

Sprint informed the FCC that it monitors its traffic in a “content and application agnostic fashion...and does not slow or choke traffic to individual customers based upon the content or application accessed.”¹¹⁵ Sprint emphasized that it “monitors only the volume of data consumed, employing a “soft” five-gigabyte cap on wireless data usage (with the customer having to pay \$.05 per additional megabyte of data).¹¹⁶ Exceeding the five-gigabyte cap, even though characterized as “soft,” results in additional charges, though Sprint labels its Internet plan as offering “Unlimited data.” Downloading one high-definition movie could consume 6 gigabytes of data,¹¹⁷ resulting in additional charges and potential suspension or termination due to “Excessive Use” of an “Unlimited” Internet access account.

Advertising “Unlimited” Internet or data access, when that is not in fact what is offered, diminishes or eliminates a dimension of competition between carriers. Rather than compete on the bandwidth of service offered, many ISPs purport to compete based on the claim that they offer “Unlimited” Internet or data service, though they impose material limits on that service.

operators Verizon and BellSouth, the latter of which has now merged with AT&T. Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141, 158, 173-74 (2003).

¹¹⁴ See Sandoval, *supra*, note 40, at 667.

¹¹⁵ Sprint, FCC Comments, *supra* note 100, at 8.

¹¹⁶ *Id.*, at 8-9 (citing Sprint’s reservation of the right to protect its networks and other subscribers’ use of its networks from continuous heavy traffic or data sessions including the right to terminate service).

¹¹⁷ Comcast, Comcast.net security, <http://security.comcast.net/get-help/faq-full.aspx?guid=00a2862a-33e2-474f-8d1f-c6dcc5ef02a9> (last visited April 24, 2010).

Rather than being able to choose between wireless ISPs who offer 5 GB or 2 GB of bandwidth use per month, and cable or other ISPs who offer 30-400 GB a month, many consumers are led to believe they are receiving “Unlimited” Internet or data service by ISPs who do not openly compete based on their unstated bandwidth limits or Internet application restrictions. While some may argue that many consumers would not comprehend how much capacity 5 or 2 GB of bandwidth represents and what exactly it does or does not allow them to do, consumers can readily understand that 5 is more than 2, that 400 is way more than 5, and that one service is offers greater capacity than the other. Such disclosures would also highlight the massive gulf between wireless Internet access plans as compared to cable or wireline services that may offer 250 or 400 GB a month of Internet access.¹¹⁸ Clear disclosures consistent with marketing claims of the type and extent of service offered will benefit consumers, promote competition between and among different types and classes of Internet service, and serve the public interest.

Clearwire offers mobile Internet services designed for computer tethering and mobile phone services including Internet access in a limited number of markets in the U.S.¹¹⁹ Some Clearwire plans are designated as “Unlimited” access plans. Clearwire’s Acceptable Use Policy (AUP) purports to redefine the meaning of “Unlimited.” Clearwire’s AUP states in small gray lettering:

Unlimited Use Plans. If you subscribe to a service plan that does not impose limits on the amount of data you may download or upload during a month, you should be aware that such “unlimited” plans are nevertheless subject to the provisions of this AUP. What this means is that all of the provisions described in this AUP, including those that describe how Clearwire may perform reasonable network management such as reducing

¹¹⁸ Comcast.net, Acceptable Use Policy, <http://www.comcast.net/terms/use/> (offering cable-based Internet access subject to a 250 GB a month consumption limit and slow-down policies in times of congestion); Cox, Features and Limits of Service (updated Sept. 29, 2009), <http://ww2.cox.com/aboutus/policies/limitations.cox> (last visited April 4, 2010) (offering cable-based Internet access ranging from 50 to 400 GB a month).

¹¹⁹ Clearwire, Plans, <http://www.clearwire.com/store/order.php> (last visited April 4, 2010).

the data rate of bandwidth intensive users during periods of congestion, will apply to your use of the Service. *The term “unlimited” means that we will not place a limit on how much data you upload or download during a month or other particular period, however, it does not mean that we will not take steps to reduce your data rate during periods of congestion or take other actions described in this AUP when your usage is negatively impacting other subscribers to our Service.*¹²⁰

While subscribers to Clearwire’s “Unlimited” plans face no set monthly bandwidth limits, they instead redefine “unlimited” to mean the absence of set bandwidth levels. Instead, subscribers face vague and undefined restraints on Internet use.

These ill-defined limitations on plan use are echoed by Clearwire’s prohibition of “Excessive Utilization of Network Resources,” even for its “Unlimited” plans. Clearwire’s AUP states in small gray lettering:

Excessive Utilization of Network Resources. Wireless networks have capacity limits and all customers can suffer from degraded or denied service when one or a small group of users consumes disproportionate amounts of a wireless network's resources. Clearwire, therefore, will monitor both overall network performance and individual resource consumption to determine if any user is consuming a disproportionate amount of available resources and creating the potential to disrupt or degrade the Clearwire network or network usage by others. This process of monitoring both overall network performance and individual resource consumption is consistent with the description of the nature of the Service previously described in this AUP. Clearwire reserves the right to engage in reasonable network management to protect the overall network, including analyzing traffic patterns and preventing the distribution of viruses or other malicious code.¹²¹

The policy allows Clearwire to engage in “reasonable network management” for any user who “is consuming a disproportionate amount of available resources and creating the potential to disrupt or degrade the Clearwire network or network usage by others,” without defining a “disproportionate amount of available resources.” Users are left with no meter to gauge whether

¹²⁰ Clearwire, Acceptable Use Policy, (Effective Nov. 22, 2009), <http://www.clearwire.com/company/legal/aup.htm> (last visited April 4, 2010) (emphasis added).

¹²¹ *Id.*

their use is proportionate. This makes it impossible for users subscribing to and paying for “Unlimited” plans to know how much they can use before they are subject to “reasonable network management.”

Clearwire’s Terms of Service reserve (in small gray lettering) the company’s right to engage in “reasonable network management,” but fail to clarify the threshold of subscriber usage that will trigger any management techniques:

c. Network Management. Clearwire reserves the right to engage in reasonable network management to protect the overall integrity of its network, including detecting malicious traffic patterns and attempting to prevent the distribution of viruses or other malicious code, and through techniques such as reducing the aggregate bandwidth available to excessive bandwidth users during periods of congestion. While the determination of what constitutes excessive use depends on the specific state of the network at any given time, excessive use will be determined primarily by resource consumption. For further information, please refer to Clearwire's Acceptable Use Policy, posted at <http://www.clear.com/legal/aup>, which forms a part of these Terms.¹²²

Although Clearwire states that “excessive use will be determined primarily by resource consumption,” no guidance is given on how much use is excessive. Nor does the AUP provide any quantitative guidance on this threshold, leaving users subject to “reasonable network management” if they use an undefined “excessive” amount of their “Unlimited” service.

Clearwire offers plans that require a credit check prior to activation or month-to-month access that does not require a prior credit check.¹²³ Clearwire’s website requires entry of an address where service is available before plan information is disclosed.¹²⁴ Upfront information about Terms of Service and acceptable use policies are particularly important for services which initiate a credit inquiry prior to purchase and activation. AT&T also requires a credit check for

¹²² Clearwire, Terms of Service, (Effective April 1, 2010), <http://www.clearwire.com/company/legal/terms.php> (last visited April 4, 2010).

¹²³ Clearwire, Plans, <http://www.clearwire.com/store/order.php> (last visited April 4, 2010).

¹²⁴ *Id.*

those inquiring about purchasing the iPhone and its mandatory two-year service contract.¹²⁵

AT&T charges those with poor credit a deposit up to \$800 to purchase an iPhone and enter into the service agreement.¹²⁶ This complicates subscriber efforts to compare services and restrictions, particularly if not all plans and terms are available to subscribers upfront.

Potential subscribers should be fully informed of the terms, conditions, and limits that apply to their service before being asked to provide personal information such as social security numbers or being subject to credit checks, even if it is a “soft” check, not reported to credit bureaus. The role of access to credit merits more study in the evaluation of Internet access gaps.

The FCC should require that ISPs make it easier for prospective buyers to find terms of their service, any restrictions on their service use, and network management policies before they buy the service. Such upfront information will enhance consumer information, choice, and competition. The FCC should ensure that consumers receive the information they need to make informed choices and that ISPs compete based on the actual service provided, rather than claim they offer “Unlimited” data or Internet service when they do not.

Likewise, the FCC should require wireless ISPs to show that the ban on any specific application is necessary for “network management.” Sandvine argues that “any network management policy (whether user-specific, application-specific or both) that is deployed to support a term of a service plan that has been transparently disclosed and freely agreed to by both a network provider and an individual Internet subscriber must be deemed *reasonable*.”¹²⁷ Where application use limits described in small print in TOS and AUP contradict promises of “Unlimited” Internet access, such application limits have not been fully and transparently

¹²⁵ Carrie Davis, *Getting an iPhone on Bad Credit*, SPENDONLIFE.COM, SAVE MORE, LIVE MORE (Sept. 23, 2009), <http://www.spendonlife.com/blog/getting-iphone-with-bad-credit> (last visited April 4, 2010).

¹²⁶ *Id.*

¹²⁷ Sandvine, *supra* note 64, at 22 (emphasis in the original).

disclosed. Even if restrictions on the use of legal application were fully and transparently disclosed, such limits would violate the FCC's proposed net neutrality policies and bar users from accessing the applications of their choice. In the current wireless marketplace many wireless ISPs ban the use of P2P, leaving consumers few choices if they want to use this application on a mobile network.

The contractual negation of "Unlimited" Internet service may also deceive consumers and distort competition as it makes it difficult for consumers to assess what they are being offered and discern what Internet applications and content they can use. The FCC should find that the contradictions between advertisements of "Unlimited" Internet access and the material limits communicated through other documents do not meet the public interest standard of Title III of the Communications Act.

The incongruities between advertising enticements of "Unlimited" Internet access and contract documents that wall off large portions of the Internet should be found to violate the public interest obligations under Title III of the Communications Act. Material limitations must be conspicuously listed in close proximity to material representations. The inclusion of material limits in contract documents such as AUP and TOS policies is not a defense to an FTC Act claim and in fact may support the charge of a violation of the FTC Act if the restrictions contradict the advertising claim and are not prominently disclosed and placed near the relevant advertising claim.

The FCC should likewise find that contract terms that are inconsistent with material advertising claims are not in the public interest. The FCC made exclusive contracts between telecommunications system operators and apartment buildings (Multiple tenant environments) unenforceable as a matter of public policy because they limited competition and increased

barriers to entry.¹²⁸ Similarly, ISP contracts that contradict or undercut the breadth of Internet service heralded in advertisements thwart competition and raise barriers to entry for other ISPs who wish to compete based on the actual levels of service provided. The FCC has the authority under Title III to determine that such practices do not serve the public interest for spectrum-based services.

B. Wireless ISPs with Bandwidth Limits and “Excessive Use” Prohibitions

Some wireless ISPs advertise and compete based on bandwidth limits for their service. For smartphones, Verizon Wireless offers 5 GB of data usage for Internet access, if added to other mobile plans.¹²⁹ Verizon Wireless offers plans for computer-based Internet access ranging from 250 Megabytes (MB) a month for \$39.99 to 5 Gigabytes (GB) a month for \$59.99.¹³⁰ Data or Internet use beyond the purchased limit is charged an overage rate of \$0.05/MB for the 5 GB plan and \$0.10/MB for the 250 MB plan.¹³¹

Verizon Wireless’ Broadband Terms and Conditions specifically permit VoIP use and declare that it is permissible to upload, download or stream audio, video and games.¹³² Verizon Wireless’ terms prohibits use of data plans in a manner that “interferes with other users’ service,” “interferes with the network’s ability to fairly allocate capacity among users” or “degrades service quality for others.”¹³³ These terms leave a great deal of latitude for interpretation. While it informs the user that the ISP’s goal is to “allocate capacity among

¹²⁸ In the Matter of Promotion of Competitive Networks in Local Telecommunications Markets, 23 F.C.C. Rcd. 5385 (2008).

¹²⁹ *Verizon Wireless Plans*, *supra* note 48.

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Verizon Wireless, Mobile Broadband Terms and Conditions, last update 1/21/10, http://b2b.vzw.com/broadband/bba_terms.html (last visited March 30, 2010) [hereinafter *Verizon Wireless Terms*.]

¹³³ *Id.*

users,”¹³⁴ it doesn’t provide examples of how those determinations will be made or of applications that might interfere with others or capacity application.

The FCC noted that tethering a wireless handset or device so that it can be used to connect a computer to the Internet is “not universally permitted by providers” of wireless Internet service.¹³⁵ Verizon Wireless states that “[c]ustomers who do not have dedicated Mobile Broadband devices cannot tether other devices to laptops or personal computers for use as wireless modems unless they subscribe to Mobile Broadband Connect.”¹³⁶ This illustrates the limits of mobile broadband as an Internet connection for computers unless the ISP offers and the consumer purchases a separate computer tethering mobile broadband plan.

Comcast Mobile Broadband is designed for tethering to computers. Comcast offers either “metro area” or “coast to coast” Internet connections, depending on the service purchased.¹³⁷ The fine print at the bottom of the screen says that the Nationwide Preferred plan includes “5 GB of 3G wireless data usage,” with additional usage charged \$0.05 for each megabyte.¹³⁸

When viewing the web page that explained the 5GB usage limit and charges for using more data, the print did not become larger when Professor Sandoval attempted to use her keyboard’s “zoom” feature to read the disclaimers. Although she set her browser tools under “view” and “text size” to the largest print, the limits and overcharge fees still appeared in a small font that was much smaller and harder to read than the product description and price information. She was finally able to enlarge the disclaimers by using her Internet browser’s tools under

¹³⁴ *Id.*

¹³⁵ *FCC Open Internet NPRM*, *supra* note 46, ¶164.

¹³⁶ *Verizon Wireless Terms*, *supra* note 132.

¹³⁷ Comcast, High-Speed 2go, <http://www.comcast.com/Corporate/Learn/HighSpeedInternet/high-speed-2go.html> (last visited April 1, 2010).

¹³⁸ *Id.*

“view,” then using “zoom” to increase the print by 200%, though the text was no longer visible through one screen, requiring extensive scrolling back and forth, up and down to read the disclaimers in a larger font.

Listing material disclaimers in small print that a potential consumer cannot make bigger or can only enlarge with great effort and computer savvy is problematic for potential subscribers with visual disabilities, people with limited vision, those who need reading glasses, the elderly, and those lacking in deep computer expertise. The Social Sciences Research Council report, *Broadband Adoption in Low-Income Communities*, noted the difficulty and expense of obtaining software designed to help people with visual disabilities enlarge print or to read text to them.¹³⁹ SSRC noted that even when enlargement software was used, it often made web page navigation more difficult and made it harder to find relevant links.¹⁴⁰ Professor Sandoval’s experience using “view” and “zoom” tools to make material disclaimers easier to read supports the SSRC observation about the navigation and comprehension difficulties resulting from enlarging text. If the material limits were printed in type as large as the representations about the service offering, such difficulties and distortions could be avoided.

While Comcast’s product description page contains a disclaimer explaining the bandwidth limits and charges for use beyond those limits, the fine print makes it difficult to read, difficult to understand, and lessens the likelihood that consumers will comprehend the level of service they can expect and the likelihood of surcharges. Nor does such fine print comport with

¹³⁹ SSRC, *supra* note 12, at 54-57 (reporting that the study authors interviewed a vision-impaired librarian who explained that special software to enlarge texts costs \$800, with a \$200 charge for updates, while one program that reads text on a screen costs \$1,000. The librarian interviewed for the study noted that many “visually disabled individuals do not have full access to the Internet given their economic and life situations” and stressed the “incredibly high levels of computer skills that are required to use some of these programs,” some requiring “thousand of keystrokes.”).

¹⁴⁰ *Id.*, at 54 (observing that when zooming software was used to increase print by four or eight times “navigating a webpage becomes a very different experience. It is no longer possible to see the whole page at once; it takes much longer to scroll/navigate/mouse across the page to find what [sic] specific sections or links.”)

the requirements of the FTC Act which mandates that material disclosures be prominent, standards the FCC should adopt.¹⁴¹

The information page about Comcast's mobile broadband service does not have a direct link to the terms and conditions restricting service use.¹⁴² A potential subscriber would have to activate the "Help and Support" link under the "Frequently Asked Questions" heading, then on the next web page find the link to the Service Agreement and Acceptable Use Policy in the fifth box down on the right hand side.¹⁴³ When the web page text was made bigger, enlarged to 150% to more easily read the disclaimers at the bottom of the initial product description page, the boxes containing the link to Legal Agreements was not visible on the screen, requiring scrolling to the right or reducing the font size. The difficulty of navigating such pages when trying to make text larger and more readable demonstrates the problems SSRC found in its study.¹⁴⁴ This information is made more confusing since the links Comcast created to "Acceptable Use Policy" and "Terms of Service" at the bottom of the Comcast Customer Central, High Speed 2go web page are links to the terms and policies for Comcast's Cable-based Internet service, NOT to the policies or terms for its mobile broadband service.¹⁴⁵

If a potential customer misses the box on the right of the screen that provides the links to the mobile broadband service agreement, to access information on the mobile broadband contract terms a potential subscriber would have to click on the sixth tab under the heading "More Information," then click on the heading "I do not want to order if there are early termination fees.

¹⁴¹ Sandoval, *supra* note 40, at 667; Gateway, Inc. 131 F.T.C. 1208, No. C-4015 (Fed. Trade Comm'n June 22, 2001) (finding that material disclaimers communicated through a 4 point font footnote did satisfy the FTC Act's requirements).

¹⁴² Comcast, High-Speed 2go, *supra* note 25.

¹⁴³ Comcast, High-Speed 2go, *supra* note 25.

¹⁴⁴ SSRC, *supra* note 12 and accompanying text.

¹⁴⁵ Comcast, Customer Central, <http://customer.comcast.com/help/high-speed2go> (last visited April 1, 2010).

What can I do?”¹⁴⁶ From that page there is a link to “contract conditions.”¹⁴⁷ Whether or not contract conditions, Terms of Service, and acceptable use policies are more clearly highlighted when a customer initiates a transaction to purchase the service, the attenuated links between the advertised services and the contract terms makes it difficult for prospective customers to compare offers including service limits and contract terms. Obscuring contract terms and service limits not only reduces consumer information and choice, it limits and harms competition if firms do not compete based on the range of their service terms.

The SSRC study suggested that difficulty in getting information about the terms of Internet services contributes to broadband “un-adoption” and barriers to adoption.¹⁴⁸ SSRC noted that its focus groups found that such “confusing and unpredictable practices [such as fine print surprises leading to large surcharges] inform the general distrust with which most service providers are viewed.”¹⁴⁹ In the SSRC’s sample of broadband Internet non-adopters, 22% were un-adopters who lost Internet service primarily through income fluctuations, but also due to “unpredictable service costs, opaque billing practices, and unresolved service issues.”¹⁵⁰

SSRC noted that “modest, consumer-friendly changes in these practices might improve the sustainability of broadband use in these communities.”¹⁵¹ The FCC should requiring that advertising claims be consistent with material disclaimers and mandate that any such consistent limitations be prominently communicated on the same page and in the same font and manner as the material advertising representation regarding the scope of Internet or data service offered.

¹⁴⁶ *Id.*

¹⁴⁷ Comcast, Customer Central, <http://customer.comcast.com/Pages/FAQViewer.aspx?eqs=9C2BA8645F1639A181C95EDA30BA98F28D66BD3075B68D60C368E3636B04CCE0C3E8A10DA124E3AA045020A7A30F5CBD54199C5B2F189256B93A450C9AD38C35> (last visited April 3, 2010).

¹⁴⁸ SSRC, *supra* note 12, at 31.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*, at 8.

¹⁵¹ *Id.*

These reforms will decrease the digital divide, protect consumers, and increase competition between service providers made to compete based on their actual service offerings.

Those who find and follow the links to Comcast mobile broadband's service agreement will find terms under the Comcast High Speed 2go Service Agreement that section 5 "reserve[s] the right to limit throughput speeds or amount of data transferred; and to deny, terminate, modify or suspend Service if your usage is determined by Comcast to be excessive" or "interferes with Comcast's ability to provide service to you or others."¹⁵² While section 5 references the separate document where information about usage caps is published, there was no hyperlink to connect to the document describing those limits.¹⁵³ The Service agreement implies that Comcast may slow, terminate, modify or suspended Internet service if the subscriber uses an undefined amount of bandwidth at any one time, although the subscriber may still be far below the monthly usage cap.

Comcast mobile broadband also has an Acceptable Use Policy, accessible from its customer central page as described above.¹⁵⁴ The Service agreement provides the web address for the Acceptable Use Policy, although it was not hyperlinked to the Service Agreement page.¹⁵⁵ The Acceptable Use Policy notes that "(h)igh-speed bandwidth, network, and radio frequency ("RF") resources are not unlimited, particularly in mobile broadband networks."¹⁵⁶ Separate from the usage caps, Comcast notes that "(i)n addition to limiting data transfer speeds

¹⁵² Comcast High Speed 2go Service Agreement (Last revised June 9, 2009), <http://media2.comcast.net/anon.comcastonline2/support/HighSpeed2Go/WiMaxDatacardTermsofService60909.pdf> [hereinafter *Comcast 2go Service Agreement*] (last visited April 3, 2010).

¹⁵³ *Id.* The page the author viewed did not provide a hyperlink to the separate document describing usage caps. To find that information a potential user would have to be proficient enough in computer use to copy the link, paste it in her web browser, then access that web address.

¹⁵⁴ Comcast, Customer Central, *supra* note 145; Comcast, Acceptable Use Policy for Comcast high-speed 2go Service, available at: <http://media2.comcast.net/anon.comcastonline2/support/HighSpeed2Go/ComcastHS2GoAUP0629.pdf> (last visited March 1, 2010).

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

and the amount of data transferred to alleviate network congestion, our mobile broadband network suppliers may also use the following network management techniques:"

On the 3G network, the supplier may use a proportional fairness scheduler algorithm that allocates network resources based on RF signal quality and other metrics. During times of congestion, the proportional fairness scheduler algorithm ensures no one user is deprived of network resources.

On the 4G network, the supplier may periodically measure a user's bandwidth usage on a specific network segment or sector, as well as measure the overall bandwidth usage for all users on that segment or sector. In situations where a user is consuming high amounts of bandwidth and the bandwidth being used on that network segment or sector is being used at high levels, the supplier may temporarily adjust the network resources made available to that user until the conditions for network congestion have passed.¹⁵⁷

No additional disclosures are made as to how Comcast determines "proportional fairness" or what it represents to a user. These terms should be highlighted in the initial representation about the Internet service provided so that the subscriber understands that she will face these restraints and network management techniques in addition to monthly bandwidth limits.

While Comcast mobile broadband does not prohibit use of P2P, FTP or newsgroups, it lists them as "common activities that may cause high data consumption."¹⁵⁸ Comcast adds that "You must also ensure that your use of the Service does not restrict, inhibit, interfere with, or degrade any other person's use of the Service, nor represent (as determined by Comcast in its sole discretion) an overly large burden on the network."¹⁵⁹

Comcast cited the contract term quoted above in the FCC's investigation of its techniques that slowed and in some cases may have thwarted use of P2P as a defense to its right to engage in such tactics.¹⁶⁰ Though it is laudable that Comcast now uses protocol-agnostic network management techniques, these techniques must be prominently disclosed to users and be

¹⁵⁷ *Id*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *See Sandoval, supra* note 40, at 671.

commensurate with the initial representations about the breadth of Internet service offered. The fine print used to list the monthly bandwidth limits and the poorly-marked trail to find these restrictions in separate documents does not satisfy the FTC Act¹⁶¹ and should be insufficient under the FCC's authority to protect consumers and competition within and between broadband Internet services, broadcast, common carrier, radio-based, and cable video services.¹⁶²

Sprint offers a device named the "U301" and a communications access plan to wirelessly connect computers to the Internet.¹⁶³ Consumers can purchase a 4G plan, available in certain listed cities, or a 3G plan available nationwide.¹⁶⁴ Sprint lists the monthly bandwidth limit for its 4G plan as "(a)ll you can stream, browse, email, chat, watch and game."¹⁶⁵ It is not clear if this is an exclusive list of Internet activities included in the plan or illustrative of the applications a subscriber can use.

For its 3G plan Sprint lists the monthly bandwidth limit of 5GB, with a limit of 300MB of roaming.¹⁶⁶ The popup screen listing the speeds and monthly limits for its 4G and 3G plan does not have a link to the terms and conditions for the plans.¹⁶⁷ To search for any contractual terms or limits a shopper would have to close the popup screen, click on the seventh tab listed under "Terms" at the bottom of the product information, only to find a small box that describes the offer expiration, early termination fees, and states, "Other conditions may apply. Read service agreement for details," though no link is provided to the service agreement.¹⁶⁸

¹⁶¹ See *id.* at 666.

¹⁶² See *id.* at 660.

¹⁶³ Sprint, Phones, available at:

http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/DisplayPhones?filterString=Data_Cards_Phone_Char (last visited April 4, 2010).

¹⁶⁴ *Id.*

¹⁶⁵ Sprint, 4G coverage, available at: http://shop.sprint.com/en/stores/popups/4G_coverage_popup.shtml (last visited April 4, 2010).

¹⁶⁶ *Id.*

¹⁶⁷ See *Id.*

¹⁶⁸ Sprint, Phones, *supra* note 163.

A search in Sprint's internal search system for "4G Service Agreement" led first to an audio and video-filled promotion for Sprint's 4G download speeds, but not to the service agreement which governs its use.¹⁶⁹ The bottom of the screen listing the phones contained a link to Sprint's "Acceptable Use and Visitor Agreement" policy, but not to the service agreement referred to in the "Terms" tab.¹⁷⁰ The "Acceptable Use and Visitor Agreement" policy prohibits "excessive use" of network resources "determined by resource consumption relative to that of a typical individual user of the Service and not by the use of any particular application."¹⁷¹ This prohibition against "excessive use" seems contradictory to the 4G plan as "(a)ll you can stream, browse, email, chat, watch and game."¹⁷² The actual service agreement was elusive, although one would hope that Sprint provides it to consumers before a purchase is completed. Even if the service agreement is provided prior to the transaction's completion, the difficulty in finding those terms discourages comparison shopping and comprehension of the material limits on the service offered.

III. Cable ISPs, FIOS and U-Verse and DSL Promises and Practices

1. Cable ISP Internet Access Promises and Contractual Limits

Comcast currently markets its cable-based Internet service as offering up to 250GB per month of Internet access. Comcast's Acceptable Use Policy provides that "(u)se of the service in excess of 250GB per month is excessive use and a violation of the policy."¹⁷³ The policy lists common activities that may cause high data consumption: high capacity traffic using file transfer

¹⁶⁹ Sprint, Search Results, http://search.sprint.com/inquiraapp/ui.jsp?ui_mode=question&charset=iso-8859-1&language=en-US&user.status=prospect&user.site=UHP&question_box=4G+Service+Agreement (last visited April 4, 2010). Other search results on this screen included Sprint news releases but not the service agreement. *See Id.*

¹⁷⁰ Sprint, Phones, *supra* note 163.

¹⁷¹ Sprint, Acceptable Use Policy and Visitor Agreement, *supra* note 103.

¹⁷² Sprint, 4G coverage, *supra* note 165.

¹⁷³ Comcast.net, Acceptable Use Policy, <http://www.comcast.net/terms/use/>.

protocol (FTP), peer-to-peer applications, and newsgroups.¹⁷⁴ Comcast adds that the user “must ensure that your use of the Service does not restrict, inhibit, interfere with, or degrade any other person’s use of the Service, nor represent (as determined by Comcast in its sole discretion) an overly large burden on the network.”¹⁷⁵

Comcast states that it uses “various tools and techniques to manage its network” and its network management activities may include “temporarily lowering the priority of traffic for users who are the top contributors to network congestion”¹⁷⁶ Though a subscriber may use less than 250GB per month, she may still face slow down techniques if she consumes a large amount of bandwidth during any unstated period of time. While Comcast says its goal is to manage its network “to deliver the best possible broadband Internet experience to all of its customers,” Comcast must ensure this goal and its policies are consistent with the representations it makes to individual customers about the 250GB per month of service they will receive.

Comcast adds that the service is for “personal and non-commercial residential use only.”¹⁷⁷ Comcast “reserves the right to suspend or terminate Service accounts where data consumption is not characteristic of a typical residential user of the Service as determined by the company in its sole discretion.”¹⁷⁸ This provides the subscriber with no yardstick with which to judge their use and whether or not it is “typical” of residential users, let alone how Comcast would make that determination.

Comcast’s “Network Management Frequently Asked Questions,” accessed when viewing Comcast’s “Terms of Service” by clicking on the Network Management link for Internet customers and then on the FAQ link on the Network Management page, explains how its

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

network management policies work and adds information about limits on subscriber use.¹⁷⁹

Comcast explains that “(i)f a certain area of the network nears a state of congestion, the [network management] technique will ensure that all customers have a fair share of access to the network.”¹⁸⁰ Comcast does not define how much is a “fair share,” nor is the initial representation of 250GB of capacity prominently qualified as subject to “fair share” limits during time of congestion.

Comcast explains that it will “identify which customer accounts are using the greatest amount of bandwidth and their Internet traffic will be temporarily managed until the period of congestion passed.”¹⁸¹ Customers using bandwidth-intensive applications could face such techniques even if they are far below the monthly limit because Comcast says use of this technique “has nothing to do with aggregate monthly data usage.”¹⁸²

These limits should be more clearly revealed in close proximity to the initial representation of 250GB of monthly data consumption capacity. Comcast must also concretely and quantitatively define its qualification of service as based on allocating a “fair share” of capacity to each user) of, regardless of whether the subscriber has reached the 250GB of monthly data consumption ceiling. Without such definitions, a subscriber cannot appropriate moderate their behavior, even if they are able to access tools to help them monitor bandwidth consumption.

¹⁷⁹ Comcast, Customer Central, Frequently Asked Questions About Network Management, <http://customer.comcast.com/Pages/FAQViewer.aspx?eqs=B8838C467AEC29C8B5F71B7F588A3B142A945C6B57A25ECFBCE76C6652AF286468BEE4C30350FA874CF789D26BF046FFC0E4679BA60C630FBC7B2D471059BA43>.

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Id.*

Time Warner Cable continues to test metered pricing for Internet bandwidth usage in Beaumont, Texas. In April 2009, facing public opposition to such pricing, Time Warner Cable dropped plans to expand metered pricing to other areas.¹⁸³

In its Acceptable Use Policy Time Warner Cable reserves right to “(l)imit the number of P2P sessions a user may conduct at the same time” and “(l)imit the aggregate bandwidth for certain usage protocols such as peer-to-peer and newsgroups.”¹⁸⁴ Time Warner also reserves the right to use “such other Network Management Tools as Operator may from time to time deem appropriate.”¹⁸⁵ To increase transparency and competition, the FCC should require ISPs to reveal the limits, if any, on the number of P2P sessions a user may conduct. The FCC should monitor whether ISPs impose bandwidth limits on specific protocols as Time Warner has reserved the right to do for peer-to-peer and newsgroups.

Time Warner Cable has reportedly terminated subscriber Internet services for violations of excessive use policies.¹⁸⁶ ArsTechnica reported that one subscriber was cut off for using 44 GB of data a week, an amount that would yield 176 GB of bandwidth consumption a month, substantially below Comcast’s 250 GB monthly limit.¹⁸⁷

Cablevision’s Optimum Internet service “allocates maximum bandwidth to non-subscribers seeking to upload P2P files from subscribers.”¹⁸⁸ Cablevision also prohibits “excessive use of bandwidth that places a large burden on the network or goes above normal

¹⁸³ Time Warner Cable Dumps Internet Meter Plan, Crain’s New York Business.Com (April 16, 2009), <http://www.craigslist.com/article/20090416/FREE/904169969> (last visited April 4, 2010).

¹⁸⁴ Time Warner Cable, Operator Acceptable Use Policy, http://help.twcable.com/html/twc_misp_aup.html

¹⁸⁵ *Id.*

¹⁸⁶ Nate Anderson, Even When Not Explicit, ISP Data Caps Still Haunt Users, ArsTechnica (last updated April 24, 2009), available at: <http://arstechnica.com/tech-policy/news/2009/04/even-when-not-explicit-isp-data-caps-remain.ars>.

¹⁸⁷ *Id.*

¹⁸⁸ Optimum, Acceptable Use Policy (Jan. 5, 2009), <http://www.optimum.net/Privacy/AUP>.

usage,” without disclosing what is excessive or “normal.”¹⁸⁹ Cablevision reserves “the right to impose limits on excessive bandwidth consumption via any means available to Cablevision.”¹⁹⁰ This clause raises several concerns since no yardstick is provided to judge “excessive bandwidth consumption.” Neither does Cablevision limit itself to reasonable network management in response to subscriber use over the undefined excessive line. The FCC must make clear in its order that ISPs are limited to reasonable network management and cannot throttle or limit consumption by any means available, no matter how unreasonable, potentially anticompetitive, or contradictory to the scope and type of Internet service promises to subscribers.

Cox Cable Internet offers broadband packages starting at 30 gigabytes monthly, combined upload and download.¹⁹¹ Other Cox broadband packages offer 50, 200, 250 or 400 gigabytes monthly, combined upload and download.¹⁹² It noteworthy that Cox’s basic package offers 6 times the bandwidth capacity as the top tiers offered through mobile broadband ISPs that disclose their monthly bandwidth limits, while Cox’s top tier offer 80 times as much as mobile broadband ISPs with monthly bandwidth limits. As will be argued below, this suggests that mobile broadband competes in a different relevant market or submarket than cable broadband services which offer exponentially more bandwidth, indicating that they are not substitutes but complements.¹⁹³

Cox’s Acceptable Use Policy states that subscribers must comply with the bandwidth and other limits for the package the subscriber selected.¹⁹⁴ Cox’s policy states that “(i)n addition to complying with the limitations for specific features, you must ensure that your activities do not

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ Cox, Features and Limits of Service (updated Sept. 29, 2009), <http://ww2.cox.com/aboutus/policies/limitations.cox> (last visited April 4, 2010).

¹⁹² *Id.*

¹⁹³ See *infra* notes 233-240 and accompanying text.

¹⁹⁴ Cox, Acceptable Use Policy (updated Sept. 27, 2006), <http://ww2.cox.com/aboutus/policies.cox#acu> (last visited April 4, 2010).

improperly restrict, inhibit, or degrade any other user's use of the Service, nor represent (in Cox's sole judgment) an unusually great burden on the network itself."¹⁹⁵ No guidelines are given for how such judgments will be made. Cox adds that "(i)f you use excessive bandwidth as determined by Cox), Cox may terminate, suspend, or require you to upgrade the Service and/or pay additional fees."¹⁹⁶ Even subscribers paying \$109 a month for the 400 GB bandwidth limit plan with a twelve month contract (\$139 a month without a contract), could find themselves running afoul of the excessive bandwidth policy as written.¹⁹⁷

Charter Cable offers Internet packages with monthly bandwidth usage limits of 100GB or 250GB.¹⁹⁸ Charter's Acceptable Use Policy states that "In the event residential usage exceeds the above-described limits Customer will be notified and required to either limit Customer's bandwidth consumption to permitted levels/limits or subscribe to a Service with a higher monthly bandwidth limit if a higher limit subscription is available."¹⁹⁹ If the "customer does not limit bandwidth consumption to permitted levels/limits after notice of the same" Charter reserves the right to require the customer to upgrade their package, pay additional fees or be subjected to Charter's network management methods including steps to "(d) implement prioritization of traffic; (e) implement protocol filtering; or (f) use any technology to be chosen by Charter at its sole discretion including, but not limited to, packet-reset and/or other packet management technology, to slow Service to Customer for purposes of conserving bandwidth."²⁰⁰

As written, this policy appears to apply only when the customer has both exceeded the bandwidth limits for the package purchased and been notified of that overage by Charter. It is

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ See e.g., Cox Communications, *Ultimate Internet Overview*, <http://ww2.cox.com/residential/northernvirginia/internet/ultimate-internet.cox> (last visited April 6, 2010).

¹⁹⁸ Charter, Acceptable Use Policy – Residential Customers (effective Feb. 2009), <http://www.charter.com/Visitors/Policies.aspx?Policy=6>.

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

noteworthy that Charter reserves the right to use protocol filtering and even packet-resets, the technique the FCC found to be unreasonable network management when implemented by Comcast to slow or block P2P use.²⁰¹

In Charter's comments to the FCC for the Open Internet proceeding, Charter stated that it "does not object to reasonable disclosure requirements regarding network management practices, which, if properly crafted, will inform users without overwhelming them and help to contain the wave of litigation that is sure to follow."²⁰² While Charter has arguably notified users that they may be subject to resets that could interfere with application use if they exceed bandwidth usage limits, the FCC should find that disclosure of intent to use resets is insufficient to excuse their use. Deploying resets for network management makes it seem to the customer that the problem is with the application or the site the customer is trying to reach, when the problem is network congestion or the level of subscriber use.²⁰³

Charter's Acceptable Use Policy seems to indicate that such tactics will only be deployed against subscribers exceeding the limits of the package they purchased and receiving notice of the need to reduce use or change plans. Although resets are listed in Charter's Acceptable Use Policy as a potential network management tool, resets have both been subject to a great deal of criticism as congestion management tools.²⁰⁴ Resets were intended by designers of Internet protocol to convey that the Internet site the user is trying to reach is unavailable.²⁰⁵ Deploying resets to police bandwidth use and thwart deployment of applications sends a potentially

²⁰¹ Formal Complaint of Free Press & Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, 23 F.C.C.R. 13,028, 13,059; *See Sandoval, supra* note 40, at 648.

²⁰² Charter Communications, FCC Comments, *supra* note 2, at 3; Sandoval, *supra* note 40, at notes 198-259 and accompanying text.

²⁰³ Sandoval, *supra* note 40, at notes 198-259 and accompanying text.

²⁰⁴ *Id.*

²⁰⁵ *Id.*, at 134 (citing INTERNET ENG'G TASK FORCE, RFC 112, REQUIREMENTS FOR INTERNET HOSTS—COMMUNICATIONS LAYERS (R. Braden ed., 1989), <http://www.faqs.org/rfcs/rfc1122.html/> (indicating through an official specification for the Internet community that discusses the requirements for Internet host software that a "reset message notifies the sender computer that a port it is trying to reach is unreachable.")).

deceptive message that the problem is with the Internet site the user is trying to reach, when the issue is congestion or bandwidth consumption.

Charter advocated that the FCC should limit equitable relief in cases where an ISP's network management practices are challenged to those "where the defendant had no reasonable grounds to believe that the use of the network management technique or introduction of a managed service was lawful."²⁰⁶ Charter argues that "the burden of proof should be placed on the complainant challenging any particular network management practice or managed service."²⁰⁷

Such a standard would be highly deferential to the ISP and place the burden of proof on the plaintiff who does not have access to information about network use or management practices. Charter's reservation of the right to use resets and protocol filtering to manage excessive bandwidth consumption emphasizes the importance of the FCC taking steps to limit ISPs to reasonable network management. Neither should ISP reservations of the right to do whatever they believe is necessary in their sole discretion to manage the network excuse the use of such techniques under all circumstances.

Developing common understanding and standards about access to Internet applications and content and network management practices will promote competition among ISPs, innovative Internet applications, and improve services to consumers. Just as the Part 68 proceedings implementing the Carterfone principles allowed modems to connect to computers,²⁰⁸ paving the way for the Internet's explosive growth, development of standards for

²⁰⁶ Charter, FCC Comments, *supra* note 2, at 19.

²⁰⁷ *Id.*

²⁰⁸ Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS), First Report and Order, 56 F.C.C.2d 593 (1975); *See Sandoval, supra* note 40, at n. 419.

Internet access and network management can usher in a new era of Internet innovation and service to all Americans.

2. AT&T DSL, Frontier DSL, U-Verse and Verizon FIOS Promises and Practices

AT&T's High-Speed Internet Terms of Service do not list any bandwidth limits, application restrictions, or network management practices.²⁰⁹ Neither does AT&T's U-Verse High-Speed Internet service, where available, impose bandwidth limits or application restrictions. AT&T reserves the right to slow users to the lowest level for the speed tier purchased, such as the U-Verse 6.1 MBPS to 10 MBPS tier, when a customer is using services that require "high bandwidth" amounts.²¹⁰

AT&T's terms of use do not announce any bandwidth limits or application use restrictions for its U-Verse High-Speed Internet Service.²¹¹ It does, however, state that AT&T may slow download speeds, especially when users are deploying high bandwidth applications, although not below the range of speeds for the level of service purchased:

In order to provide a consistently high-quality video service, AT&T Uverse High Speed Internet throughput speeds may be temporarily reduced when a customer is using other U-verse services in a manner that requires high bandwidth. This could occur more often with higher speed Internet access products. It may be necessary, for some AT&T High Speed Internet users, for AT&T to set a maximum downstream speed on a customer line to enhance the reliability and consistency of performance. While this performance optimization process will prevent some customers from obtaining the maximum downstream speed capability, service capability speed will not be set lower than the service tier you have purchased.²¹²

²⁰⁹ AT&T, AT&T High Speed Internet Terms of Service /att.net Terms of Use, <http://info.yahoo.com/legal/us/att/terms/all/> (last visited April 4, 2010).

²¹⁰ AT&T, AT&T U-Verse Terms of Service, <http://www.att.com/u-verse/att-terms-of-service.jsp#internet> (Last visited April 4, 2010).

²¹¹ *Id.*

²¹² *Id.*

Though it does not appear that AT&T U-verse has an “Excessive Use” policy, the policy quoted above should be clearer about which applications are high-bandwidth uses and how much of a slow-down they will face.

Verizon reserves the right to terminate FIOS High-Speed Internet users who “generate excessive amount of email or Internet traffic.”²¹³ While this policy may be directed at people who generate “spam,” unwanted, repetitious solicitation emails, it may also be interpreted to cover other high volume or bandwidth uses such as video or P2P, although the boundaries of “excessive” use are not spelled out. Verizon’s says that the subscriber “may not exceed the bandwidth usage limitations that Verizon may establish from time to time for the service,” although no bandwidth use limits are announced in that policy for FIOS subscribers.²¹⁴

Verizon announced in March 2010 that it was suspending expansion of service into new areas, though it still planned to have its service pass 18 million homes by the end of 2010.²¹⁵ With this suspension of expansion plans, Verizon’s FIOS will offer a competitive alternative for high-speed, high-bandwidth Internet service to only a small section of the American population, concentrated in a few cities.

Frontier DSL Frontier offers Internet connections that it boasts “won't bog down during peak hours. There's no neighborhood sharing.” Frontier warns subscribers that if the company’s acceptable use policy is violated, the service will be terminated without notice:

Customers must comply with all Frontier network, bandwidth, data storage and usage limitations. Frontier may suspend, terminate or apply additional charges to the Service if such usage exceeds a reasonable amount of usage. A reasonable amount of usage is defined as 5GB combined upload and download consumption during the course of a 30-

²¹³ Verizon, Verizon Online Terms of Service (Effective Jan. 17, 2010), http://www.verizon.net/policies/popups/tos_popup.asp. (Last visited April 4, 2010).

²¹⁴ *Id.*

²¹⁵ *Cities Seek Alternative as Verizon Halts Further FIOS Expansion*, COMMUNICATIONS DAILY (March 31, 2010), available at: 2010 WLNR 6915820.

day billing period. The Company has made no decision about potential charges for monthly usage in excess of 5GB.²¹⁶

Thus, Frontier defines a “reasonable amount of usage” as “5GB combined upload and download” monthly. Frontier reserves the right to terminate or suspend subscribers who exceed those limits.

Frontier informs customers that the “typical Frontier household uses less than 1.5GB or 1,500 megabytes a month.”²¹⁷ This description of typical household use is helpful and provides more information than other ISPs who merely prohibit use beyond that of a typical household, but fail to inform subscribers what a typical household uses. This limit may still be difficult for many subscribers to observe, however, as Sandvine noted that bandwidth monitoring tools available to Internet users are limited.²¹⁸

Frontier states that the company “is providing (NOT LIMITING) all customers with a minimum of 5GB of usage on a monthly basis. The Company has made no decision at this time to charge for additional usage but wants to start to educate customers about their usage.”²¹⁹ The policy states that “Your service will not be interrupted at 5Gb. You will continue to use our High Speed Internet service without disruption.”²²⁰

The characterization of the 5 GB limit as a promise of bandwidth and not a limit seems contradicted by Frontier’s other policies. Frontier also requires that:

Customers must comply with all Frontier network, bandwidth, data storage and usage limitations. Customers must ensure that their use of the Service, including the amount of data sent or received in the course of a month or shorter periods, does not exceed the limitations that are now in effect or may be established in the future. Continued use of the Service will constitute acceptance of any new limits. If Customer's use of the Service exceeds the applicable limitations, that is a violation of these Terms and Conditions. In such cases, Frontier may, in its sole discretion, terminate or suspend Customer's Service

²¹⁶ Frontier, http://www.frontier.com/policies/residential_aup/ (last visited April 21, 2010) [hereinafter Frontier AUP].

²¹⁷ *Id.*

²¹⁸ Sandvine, *supra* note 64, at 6.

²¹⁹ Frontier AUP, *supra* note 216 (emphasis in the original).

²²⁰ *Id.*

account or request that Customer subscribe to a version of the Service with higher usage limitations if Customer wishes to continue to use the Service at higher usage levels.²²¹

This policy leaves subscribers in a quandary about whether their usage is limited to 5GB and what usage will violate the AUP and put their Internet service at risk.

V. Deceptive Broadband Promises and Practices and the Digital Divide

Wireless Internet services are an important and growing means of accessing the Internet. The Pew Internet and American Life Project found in 2010 that “55% of Americans connect to the Internet wirelessly at least on occasion.”²²² The Joint Center for Political and Economic Studies conducted a study of “*National Minority Broadband Adoption*”.²²³ The Joint Center’s survey found that mobile phone ownership and use was high among respondents; 88% of whites surveyed owned a cell phone, compared to 81% of African-Americans and 80% of Hispanics.²²⁴

Pew’s 2010 report found that “83% of adults have cell phones or smartphones and, among them, 35% have accessed the internet via their phone.”²²⁵ The Joint Center’s study found that 50% of African-Americans and 42% of Hispanics surveyed “reported using their cell phone

²²¹ Frontier, http://www.frontier.com/terms/Residential_HSI_Terms_and_Conditions/ (last visited April 21, 2010).

²²² Lee Rainie, INTERNET, BROADBAND, AND CELL PHONE STATISTICS, AS OF DECEMBER 2009, 74% OF AMERICAN ADULTS (AGES 18 AND OLDER) USE THE INTERNET, PEW INTERNET AND AMERICAN LIFE PROJECT 7 (Jan. 2010) [hereinafter PEW 2010 INTERNET ACCESS REPORT], <http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics/Report.aspx?r=1> (last visited April 5, 2010).

²²³ Jon P. Gant, Nicol E. Turner-Lee, Ying Li, Joseph Miller, NATIONAL MINORITY BROADBAND ADOPTION: COMPARATIVE TRENDS IN ADOPTION, ACCEPTANCE AND USE, Joint Center for Political and Economic Studies, [hereinafter NATIONAL MINORITY BROADBAND ADOPTION REPORT] (Feb. 2010), http://www.jointcenter.org/publications_recent_publications/media_and_technology/national_minority_broadband_adoption (last visited April 5, 2010). The Joint Center surveyed by telephone in English and Spanish 2,741 adults living in the continental U.S. The survey sample was chosen to generalize the U.S. population while over-sampling African-Americans and Hispanics to increase respondents in those groups.

²²⁴ *Id.*, at 34.

²²⁵ PEW 2010 INTERNET ACCESS REPORT, *supra* note 222, at 7.

to access the Internet.”²²⁶ Among African-Americans, 41% sent or received email from their cell phone, as did 35% of Hispanics surveyed.²²⁷

Pew reported higher levels of wireless Internet use for African-Americans (59%) and Hispanics (62%) (both English and Spanish-speaking Hispanics), than among Whites (52%).²²⁸ Among respondents to the Joint Center study who did not use their mobile phone for Internet access “most African-Americans indicated a lack of interest in using the device to browse the Internet (53%) and Hispanics stated that the cost of accessing the Internet on their cell phone was too expensive (55%).”²²⁹ The possibility of surcharges from exceeding bandwidth limits, which are difficult to discern for many ISPs including wireless providers, may discourage mobile phone use for Internet access.

Pew touted high levels of mobile wireless use among African-Americans for Internet access as helping to offset “lower levels of access tools that have been traditional onramps to the internet, namely desktop computers, laptops, and home broadband connections.”²³⁰ The Joint Center’s study throws caution on labeling wireless Internet as a substitute Internet onramp.

The Joint Center found that limitations in the device made using a cell phone a distant third choice for Internet access; most African-Americans and Hispanics preferred to access the Internet from a laptop or stand-alone computer.²³¹ All racial and ethnic groups the Joint Center surveyed shared similar preferences regarding the device used to access the Internet; 53% prefer to use a laptop, 33% prefer a desktop, and only 6% preferred to access online content through a

²²⁶ NATIONAL MINORITY BROADBAND ADOPTION REPORT, *supra* note 223, at 4.

²²⁷ *Id.*

²²⁸ PEW 2010 INTERNET ACCESS REPORT, *supra* note 222, at 8.

²²⁹ *Id.*

²³⁰ John Horrigan, Wireless Internet Use, Internet & American Life Project, Pew Research Center, July 2009, available at: [http://www.pewinternet.org/\[wave symbol\]/media/Files/Reports/2009/wireless-Internet-Use.pdf](http://www.pewinternet.org/[wave symbol]/media/Files/Reports/2009/wireless-Internet-Use.pdf).

²³¹ NATIONAL MINORITY BROADBAND ADOPTION REPORT, *supra* note 223, at 4.

cell phone.²³² This comment suggests that these preferences reflect not just the device but wireless Internet Service plans and policies that offer significantly less bandwidth and speed and restrict more protocols and content use than many wireline telephone or cable-based plans.

This study found mammoth differences in bandwidth usage ISPs make available to consumers depending on the medium the ISP uses. Most wireless ISPs do not reveal how much bandwidth subscribers can use through “Unlimited” Internet access plans, though the service is bounded by vague “excessive use” policies. Many wireless ISPs who have clear limits restrict monthly bandwidth consumption to 5 GB. Wireless ISPs who offer computer tethering plans limit use to 3 to 5 gigabytes per month.²³³ Comcast informs users that high-definition movie downloads typically consume 6 gigabytes of bandwidth.²³⁴ Thus, one high-definition movie download would exceed a 5 gigabyte bandwidth limit for a wireless carrier and is far beyond the use typical of a smartphone user.

In contrast Comcast limits its cable-Internet subscribers to 250 gigabytes of bandwidth consumption a month.²³⁵ Cox cable offers internet access packages ranging from 30 to 400 gigabytes a month of Internet bandwidth usage.²³⁶ Wireless Internet bandwidth limits of 3 to 5 gigabytes monthly are very small when compared to cable Internet services that offer 250-400 gigabytes a month of Internet bandwidth usage.

The chasm in bandwidth consumption limits between wireless, wireline and cable-ISP indicates that characterizing Internet services offering 6% or less of the minimum bandwidth available through ISPs operating through other media as “Unlimited” distorts consumer choice

²³² *Id.*

²³³ See *supra* notes 138 and accompanying text.

²³⁴ *Comcast Bandwidth Guidelines*, *supra* note 8.

²³⁵ See *supra* note 115 and accompanying text.

²³⁶ Cox, Features and Limits of Service (updated Sept. 29, 2009), <http://ww2.cox.com/aboutus/policies/limitations.cox> (last visited April 4, 2010).

and competition. Requiring ISPs to compete based on the actual service provided will enhance competition and protect consumers. By claiming to offer “unlimited” Internet or data service, ISPs are eliminating a dimension of competition based on the extent of service provided.

This Article observes that ISP practices, along with device differences, limit substitutability between wireless phones with broadband access and computers with fixed line broadband access. SSRC found that “Dial-up and cell-phone-based Internet service — although used in some contexts — do not provide an adequate level of access to many of the core services respondents described as important.”²³⁷

These distinctions are overlooked in the FCC’s definition of High-speed Internet services. The FCC’s definition of broadband has focused to date on the single dimension of speed; the FCC has defined any service offering over 200 kilobytes (KB) of speed in one direction as “High-Speed Internet.”²³⁸ Professor Sandoval testified at the FCC workshop on broadband measurement in September 2009 that the extent and breadth of broadband access, and therefore Internet market definition, is multidimensional and affected by ISP restrictions.²³⁹

Internet service speed (whether peak, average, or theoretical speed) does not accurately measure whether broadband services by different Internet Service Providers (ISPs) are substitutes. Internet services are distinguished by: ISP policies limiting or prohibiting access to certain Internet applications; bans or restrictions on attachment of devices such as computers; bandwidth usage limits; network management practices including excessive use prohibitions for allegedly unlimited services; techniques that slow large bandwidth users during congestion;

²³⁷ SSRC, *supra* note 12, at 5.

²³⁸ See FCC 2008 High-Speed Internet Access Report, *supra* note 9, n.1.

²³⁹ See CATHERINE SANDOVAL, MEASURING INTERNET ACCESS SUBSTITUTES AND SERVICE GAPS (2009), available at http://www.broadband.gov/docs/ws_benchmarks/sandoval.ppt; *FCC Faces Tough Challenge Getting Broadband Benchmarks Right, Experts Agree*, WASHINGTON INTERNET DAILY, Sept. 3, 2009, at 3, http://www.digitalgovernment.com/media/Downloads/asset_upload_file463_2605.pdf.

peak, average and slowdown speeds. Differences between hardware devices used to access the Internet such as mobile phones compared to laptops or desktops also differentiate Internet access, particularly since devices and ISP plans are often bundled. These Internet service restrictions indicate that not all Internet services are substitutes.

The FCC must revise its definition of high-speed Internet service. Classifying all Internet service as high-speed because they offer more than 200KB of access in one direction misses the important limits and distinctions in Internet service that undermine substitutability between types or submarkets of service. The FCC's classification of very different levels and types of Internet service as all "high-speed Internet" obscures the extent to which many people do not enjoy the benefits of competition for high-speed, high-bandwidth Internet use that allows access to a broad range of applications and content. In 2009, the FCC's report on High-Speed Service for Internet Access recognized that millions of Americans do not live in places where they are offered a choice of BOTH high-speed cable and DSL Internet service.²⁴⁰

The SSRC found that among the focus groups interviewed for the study of *Broadband Adoption in Low-Income Communities* "Lack of consistency and transparency in billing" was "a significant concern among [broadband Internet] non-adopters," and especially among "un-adopters," those who once had but cancelled or lost broadband service.²⁴¹ SSRC reported that "(n)o one seemed sure that they were getting what they are paying for (for example, if they are getting the speed that they should) or that charges were accurate."²⁴² One Internet "un-adopter" SSRC interviewed observed, "(y)ou have a bill and they tell you it's gonna be this much, but at the end of the month it's this much. And you know, that's why people with the Internet get cut

²⁴⁰ See FCC 2008 High-Speed Internet Access Report, *supra* note 9, at n.1.

²⁴¹ *Id.*, at 30.

²⁴² *Id.*

off sometimes. Maybe they don't understand.”²⁴³ Lack of transparency, deceptively conveyed restrictions or surcharges for Internet access, and contradictions between advertising and contract comport with the SSRC's study findings of high levels of “un-adoption” among those without Internet access.²⁴⁴

The FCC's study of broadband adoption found that in late-2009 “42% of Americans with disabilities have broadband at home, considerably below the national average of 65%.”²⁴⁵ The FCC found that “39% of [Internet] non-adopters have disabilities, much higher than the 24% of the overall survey respondents who have a disability.”²⁴⁶

Among Internet non-adopters with a disability, 25% cited “digital literacy” as one of their main concerns motivating lack of Internet access at home, compared to 19% of non-adopters without a disability.²⁴⁷ Those disabled Internet non-adopters may in fact be confounded by ISP practices that make their terms difficult to read, material disclaimers downplayed through fine print on difficult to access documents, and attempts to circumscribe through contract the scope of broad ISP promises about Internet access. The failing is not the user's “digital literacy,” but the contradictory communication of policies and promises, conveyed in a manner that is difficult to read and at times impossible to comprehend when based on vague and undefined limits. In this manner, lack of transparency, contracts that contradict ISP advertising, and practices of obscuring rather than prominently highlighting material disclaimers in close proximity and

²⁴³ *Id.*, at 31.

²⁴⁴ SSRC, *supra* note 12, at 8.

²⁴⁵ Elizabeth Lyle, A GIANT LEAP AND A BIG DEAL, DELIVERING ON THE PROMISE OF EQUAL ACCESS TO BROADBAND FOR PEOPLE WITH DISABILITIES 7, FCC, Office of Strategic Planning and Policy Analysis, OBI Working Paper Series, <http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-%28obi%29-working-report-giant-leap-big-deal-delivering-promise-of-equal-access-to-broadband-for-people-with-disabilities.pdf> (last visited April 25, 2010).

²⁴⁶ *Id.*

²⁴⁷ *Id.*

placement to advertising representations contribute to Internet non-adoption, un-adoption, and the digital divide.

Improving consumer disclosures upfront about the extent of service offered, any limitations on service, and activities or use that may lead to surcharges will be critical to increasing Internet adoption. Such steps will help people access the Internet, maintain their service, and enhance competition between ISPs.

This Reply Comment suggests that these distinct classes of Internet service should each receive more consumer protection. All services need more transparency and disclosure to protect consumers and enhance competition. The Commission should also consider whether the prohibitions on use of certain Internet applications and content justify application of net neutrality rules to each class of Internet service. This analysis supports FCC jurisdiction over wireless ISPs under its direct Title III authority, and ancillary jurisdiction over ISPs operating through non-wireless services based on the need to protect competition and promote consumer choice between types of ISP and regulated services.

VI. Conclusion

Today many wireless ISP services do not compete based on what is actually offered, but offer the grail of “Unlimited” Internet access, only to redefine “Unlimited” to mean “limited.” This not only affects competition between wireless ISPs, it also distorts competition with other communications media. These practices skew competition between ISPs and other regulated services such as broadcasters, spectrum users, common-carriers, and cable video operators. Subscribers believing they have paid for “Unlimited” Internet access via their wireless ISPs may forgo other means of Internet access or communications content, only to find that their “Unlimited” plan was restricted, and that they may owe more money to their wireless ISP than

the promise of “Unlimited” data would lead them to believe. The effect of such competitive distortions on different media describes the interests to be served by the FCC’s exercise of its “ancillary” jurisdiction to regulate ISPs in order to carry out its statutory duties with regard to common carriers, spectrum-based services, and cable-video services. Such jurisdiction supplements the FCC’s direct Title III authority over wireless ISPs required to serve the public interest as spectrum licensees.

This Reply Comment’s examination of ISP promises and practices supports the FCC’s proposal to codify a principle of transparency “to protect and empower consumers and to maximize the efficient operation of relevant markets by ensuring that all interested parties have access to necessary information about the traffic management practices of networks.”²⁴⁸ The FCC’s proposed rule must require that disclosures of network management practices and limits on the type and extent of Internet service offered must be consistent with the type and level of internet service offered at the time the parties entered into the contract and persist through the contract’s duration. Firms should not be allowed to prominently advertise and induce subscriptions based on promises of “Unlimited” internet, web, or data access, refuted by material limits on legal applications or uses in separate terms of service.

The FTC requires that material disclosures and limits be placed in close proximity and prominently to material service promises, a standard the FCC should adopt. T-Mobile’s web page requires potential subscribers or application developers to guess that they should click on the 19th of 20 hyperlinks on the bottom of the page to find out whether there are material limits on the ISP’s promise of unlimited Internet service.²⁴⁹ The display of material limits in this manner does not comport with the spirit or letter of transparency, Title III of the

²⁴⁸ *FCC Open Internet NPRM*, *supra* note 46, ¶118.

²⁴⁹ *T-Mobile Terms and Conditions*, *supra* note 94.

Communications Act, or the FTC Act. Neither would a notation that says something such as “material limits may apply” or “see terms and conditions” satisfy the requirements for proximity, placement, and prominence of material limits on material promises.

Only diligent customers with Internet access, sophisticated at searching web sites, possessing high levels of English reading comprehension, informed by sophisticated understanding of legal and computer terminology, may find information about the limits of the service they are buying. Even such a sophisticated consumer will be confounded by ISP reservations of rights to do whatever the ISP wants in its sole discretion to manage the network or “excessive use” policies without boundaries.

ISPs are not required to report on how they enforce these policies or what they do to subscribers who violate them. This results in an information gap that masks the consequences of ISP policies and practices. There is no publicly available data concerning: how frequently ISPs cut off, slow or limit subscriber access to protocols or content. Neither is there public information describing how ISPs police their contract terms. Such information is critical to assessing the consequences of slowed or blocked access, contract termination, surcharged or other ISP conduct for Internet access and the digital divide. This Reply Comment recommends that as part of its review of wireless ISP practices, the FCC should exercise its Title III jurisdiction over wireless ISPs and its ancillary jurisdiction to require reports of subscriber termination, surcharges, restrictions on Internet application or content use, and network management policies that limit subscriber use of lawful Internet applications and content.

This Reply Comment also recommends that the FCC should not allow ISPs to displace or modify any rules it adopts in this proceeding through ISP contracts, Acceptable Use Policies, or Terms of Service, or ISP reservations of the right to unilaterally modify subscriber contracts.

The FCC must take steps to ensure that consumers receive what they bargained for and were promised by the ISPs. The FCC's actions will also protect internet application developers and providers who rely on ISP representations about the type and extent of Internet service offered in designing their applications and content.

Increasing transparency is an important step for protecting consumers and competition. The FCC should recognize that if markets merely replicate unduly restrictive practices limiting access to content and applications, transparency alone is not enough. This analysis highlights the need to ensure that ISP network management practices are reasonable and not merely subject to the ISP's sole discretion.

Sincerely,

/s/

Catherine Sandoval
Associate Professor, Santa Clara University School of Law
Associate Director, Broadband Institute of California

April 26, 2010