Diversity, Network Neutrality, and Network Equality by David Honig, Esq., President and Executive Director, Minority Media and Telecommunications Council and

Latoya Livingston, Esq., Earle K. Moore Fellow, Minority Media and Telecommunications Council¹

Presented at the Pennsylvania State University/Fordham University Digital Diversity Conference, New York, NY

May 4, 2011

| | Abstract | 2 |
|------|---------------------------------------------------------------------|----|
| I. | Introduction | 2 |
| II. | The Concept of Network Equality | 3 |
| III. | Overview of the Open Internet Rules | |
| | A. No Blocking | 7 |
| | B. Transparency | 7 |
| | C. No Unreasonable Discrimination | 8 |
| | D. Reasonable Network Management | 8 |
| | E. Carve-Outs, Exceptions: Mobile Networks and Specialized Services | |
| IV. | Assessing the Contours of Broadband Regulation on Minorities | 11 |
| | A. General Impact on Minority Consumers and Entrepreneurs | |
| | B. Importance of Specialized Services to Minority Consumers | 14 |
| | C. Importance of Specialized Services to Minority Businesses | 16 |
| | D. Importance of Specialized Services to Broadband Deployment | 16 |
| V. | Civil Rights Concerns for Broadband Policy Going Forward | 17 |
| VI. | Recommendations | 20 |
| VII. | Conclusion | |

Diversity and Network Neutrality

¹ The Minority Media and Telecommunications Council (MMTC) was a party, and counsel for over a dozen other national minority and civil rights organizations in the Commission's Open Internet rulemaking proceeding, including the Hispanic Technology and Telecommunications Partnership, Latinos in Information Sciences and Technology Association, National Association for the Advancement of Colored People, National Black Caucus of State Legislators, National Black Chamber of Commerce, National Hispanic Caucus of State Legislators, and the U.S. Hispanic Chamber of Commerce. The authors acknowledge and appreciate the helpful suggestions offered by Jacqueline Clary, Charles Davidson, Joycelyn James and Michael Santorelli.

<u>Abstract</u>

The Federal Communications Commission ("Commission") reached a major milestone on December 21, 2010. On that day, the Commission adopted Net Neutrality Rules ("Open Internet Rules" or "Rules") on a 3-2 party line vote. While the Rules are generally a step forward in preserving an Open Internet, most major national civil rights organizations maintain that, if misapplied, the rules governing network management and specialized services could harm the interests of minority consumers and entrepreneurs, and detract from the Commission's vital goal of closing the digital divide. This paper illuminates these issues.

I. Introduction

The Internet has emerged as the most ubiquitous and powerful tool of mass communications. Without unnecessary restrictions, the Internet has the potential to do what no other communications service has been able to do before – close the digital divide, based on race, income, wealth, geography, education and age.² The recently adopted Open Internet Rules³ are a beneficial means of closing the divide so long as the Commission uses the Rules to protect the freedom and limitless possibilities of the Internet and foster entrepreneurship and investment in un-served and underserved communities.

How did these Rules become a critical civil rights issue? Most scholars and policymakers agree that the integration of broadband technology and digital devices and applications into daily lives is essential to one's ability to achieve first class citizenship in the digital age.⁴ In 2009, the NAACP announced the principle of "network equality,"⁵ predicting that those who have yet to adopt broadband will suffer the disparate impact of being "relegated

² Remarks by Larry Irving, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, U.S. Department of Commerce at the National Press Club, (July 8, 1999), available at

http://www.ntia.doc.gov/ntiahome/fttn99/irving.htm (last visited May 2, 2011).

³ Preserving the Open Internet, Report and Order, 25 FCC Rcd 17905 (2010) ("Open Internet Order").

⁴ FCC, *Connecting America: The National Broadband Plan* (rel. March 17, 2010), 2010 FCC LEXIS 1643 ("*National Broadband Plan*") at Part II.

⁵ See National Association for the Advancement of Colored People ("NAACP") Resolution to Advance Digital Equal Opportunity, p. 1 (adopted unanimously by the NAACP National Board of Directors, October 17, 2009) (available from the authors) ("The [NAACP], as the preeminent civil rights organization focused on ensuring the political, educational, social and economic equality of all persons, believes that universal broadband adoption is the key to first class citizenship in the digital age.")

to lives of separate and unequal status as compared to those with access to advanced communication technologies."⁶ This is unacceptable. To avoid this result, the NAACP declared that "all people must have access to advanced communications technologies, and that to these ends, whether by legislation or executive order, [it should be the priority of] Congress and the President of the United States [to] ensure that all people have access to broadband high-speed internet, particularly [those] who are ordinarily not afforded the opportunity to take advantage of these essential tools of digital citizenship."⁷

It is through these lenses of near boundless opportunity and the dire consequences of misapplied regulations that we begin our examination of the Open Internet Rules. On one hand, the Rules are a beneficial means of prohibiting network operators from interfering with web traffic to American homes, but, if misapplied, the Rules could unintentionally delay full participation of minorities as digital consumers and producers and impede the paramount objective of closing the digital divide.

II. The Concept of Network Equality

Nearly all participants in the debate over net neutrality agree that the Internet should remain open and that providers should be more transparent in their dealings with consumers regarding their network practices, performance, and services. The need for an open Internet can be clearly drawn from civil rights history, which teaches that access to the mass media is vital to the advancement of communities that experience second-class citizenship.⁸ It follows that Internet service providers ("ISPs") should be prohibited from blocking lawful content, devices or applications, thereby inhibiting free and open speech. Fortunately, our digital society provides the framework for deterring bad behavior through the shaming culture of the Internet, which has been largely effective in deterring abuses even when – as is presently the case - no Open Internet regulations are in effect.⁹

⁹ Such abuses led to the 2010 decision in Comcast Corp. v. FCC, 600 F.3d 642 (D.C. Cir. 2010). In 2007, Internet users discovered that Comcast was secretly interfering with its customers' lawful use of BitTorrent and other peer-to-peer applications. After first denying that the practice existed, Comcast eventually agreed to end it after user outrage. In 2008, the FCC issued an order finding Comcast in violation of federal Internet policy as stated in various provisions of the Communications Act and prior Commission decisions. On April 6, 2010, the U.S. Court of Appeals for the District of Columbia unanimously ruled against the FCC's sanction of Comcast for denying bandwidth to BitTorrent users in 2007, stating that the FCC's 2008 order lacked

 $^{^{6}}$ Id.

⁷ Id.

⁸ See Office of Communication of the United Church of Christ v. FCC, 359 F.2d 994, 1006 (D.C. Cir. 1966).

As discussed below,¹⁰ the ambiguous wording of several aspects included in the *Open Internet Order*, in particular provisions regarding network management and specialized services, may unintentionally create additional barriers to access capital for minority digital entrepreneurs. Concerns regarding the misapplication of these provisions are not abstract. The Commission has a history of neglecting civil right issues. For example, the Commission's recently chartered Technological Advisory Committee was initially comprised of 38 members - including only one person of color and one woman.¹¹ Also, for more than 14 months, the Commission delayed releasing a regular report to Congress that examines the market entry barriers facing small businesses.¹² Meanwhile, still languishing in bureaucratic backlog are 72 proposals by civil rights organizations to advance minority entrepreneurship. Most of these proposals relate to broadcasting and cable – the heritage technologies that are an entry route to online entrepreneurship.

Minority entrepreneurs and civil rights organizations have expressed concern that a narrow reading of the Commission's rules regarding network management and specialized services could impede diversity in two respects. First, on both sides of the Internet's two-sided market, these rules could shift costs for broadband deployment from heavy users to light users,

"sufficient statutory basis," because it failed to identify "any express statutory delegation of authority" for putting an end to Comcast's undisclosed interference with its own customers' communications. Nonetheless, in the court of public opinion, Comcast lost their fight due to user disapproval of its actions. *See* "FCC's General Counsel on Comcast Decision: "We Are Assessing the Implications" available at <u>http://www.executivegov.com/2010/04/fccs-general-counsel-on-comcast-decision-we-are-assessing-the-implications/</u> (last visited May 09, 2011). *See also* the Federal Communications Commission Technological Advisory Council, 2009 FCC LEXIS 527 (FCC 2009), available at <u>http://www.fcc.gov/oet/tac/</u> (last visited May 7, 2011).

¹⁰ Hon. Robert McDowell, Commissioner, Federal Communications Commission, Statement at the National Broadband Plan Workshop, "Capitalization Strategies for Small and Disadvantaged Businesses" (Nov. 12, 2009); *see also Preserving the Open Internet*, Comments of the National Organizations, GN Docket No. 09-191, WC Docket No. 07-52 (filed Jan. 14, 2010) (the "National Organizations January 14, 2010 Open Internet Comments") at 9, available at <u>http://mmtconline.org/lp-pdf/NatlOrgs%20NN%20Comments%20011410.pdf</u> (last visited May 2, 2011).

¹¹ See FCC Announces Formation of the Technological Advisory Committee, FCC Public Notice (released October 25, 2010).

¹² Section 257 Triennial Report to Congress Identifying and Eliminating Market Entry Barriers For Entrepreneurs and Other Small Businesses, 52 Comm. Reg. (P&F) 777, FCC 11-33 (rel. Mar. 3, 2011), 2011 FCC LEXIS 610. This report was solid and comprehensive, although more work needs to be done by the FCC to implement the programs and policies outlined in the report.

such as low and medium income consumers, which would discourage adoption by the nation's 100,000,000 people who have yet to adopt broadband at home.¹³ Second, these rules could unintentionally prevent small minority owned businesses, which provide much of the culturally relevant content necessary to spur minority adoption, from competing effectively with established Internet-based companies through the use of enhanced services.

Ensuring that the Commission does not lock in current levels of inequality is the core goal of civil rights organizations. They maintain that when regulating broadband – where adoption correlates with socioeconomic factors, "neutral" seldom equates to "equal" and any attempt to obtain neutral practices may actually lock in pre-existing systemic disparities.¹⁴ Civil rights organizations contend that as the nation transitions from an industrial to a digital economy, policymakers should focus on how to avoid a repetition of the second class treatment of minorities that accompanied the nation's transition from an agricultural to an industrial economy in the 1930s through 1950s.¹⁵ Our national priorities with respect to our digital future cannot be ignored in light of the current state of minority broadband adoption.

In 2010, the home adoption gap between African Americans and White Americans was 19 percentage points – 10 points of which were attributable to race after controlling for differences in socio-economic factors including education, age, household size, urban-rural location, foreign-born status, disability status and state of residence.¹⁶ Similarly, the home adoption gap between Hispanics and Whites was 20 points, 14 points of which were attributable

¹⁶ See NTIA November 2010 Study, pp. 11-13.

¹³ See National Telecommunications and Information Administration, "Exploring the Digital Nation: Home Broadband Internet Adoption in the United States" (November 2010), available at <u>http://www.ntia.doc.gov/reports/2010/ESA_NTIA_US_Broadband_Adoption_Report_11082010</u>.pdf (last visited April 25, 2011) ("NTIA November 2010 Study"). This study used information from the U.S. Census Bureau, Current Population Survey (CPS) and CPS School Enrollment and Internet Use Supplement, October 2009, and ESA calculations.

¹⁴ The Commission used the phrase "'[e]quitable' does not mean 'equal'" in its Universal Service Report and Order to describe the relationship between interstate and intrastate carriers' ability to recover from their customers, but the idea holds true of all inequalities, especially in the telecommunications realm. *See Federal-State Joint Board on Universal Service*, 12 FCC Rcd 8776 at 9204 (1997).

¹⁵ Preserving the Open Internet, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, 13100 ¶88 (2009) ("Open Internet NPRM"). The definitive treatment of how the transition from an agricultural to an industrial economy left minorities with even greater social and economic inequality than they had experienced previously is Ira Katznelson, WHEN AFFIRMATIVE ACTION WAS WHITE (W.W. Norton & Co. 2005).

to race after controlling for these same socio-economic factors.¹⁷ Civil rights organizations maintain that closing this gap to achieve universal broadband adoption and informed use must be the nation's top broadband policy priority today.

In sum, the misapplication or misinterpretation of several of the Commission's Open Internet Rules could threaten the continued adoption of broadband among communities of color. Since the Commission has, to date, largely failed to address issues related to closing the digital divide, it is essential that the Commission make clear to service providers and stakeholders in these communities that the Rules will not unduly harm or threaten minority-focused efforts targeted at bolstering adoption and utilization rates.

III. Overview of the Open Internet Rules

Most national civil rights organizations, including MMTC, supported the original four Open Internet principles in its 2005 *Internet Policy Statement*. These principles were viewed as an effective way to safeguard an open Internet while successfully balancing the interests of consumers, broadband Internet access providers, and providers of content, applications, and services.¹⁸ In practice, these principles proved to be effective.¹⁹ As a result, it is not surprising that a national survey conducted in late 2010 found that an overwhelming majority of Americans agreed that the Internet is working well in its current form.²⁰

However, once the legal underpinnings of these principles were challenged and largely rebuked by a federal appeals court, the Commission endeavored to craft formal rules to govern the Internet.²¹ Through these Rules, the Commission endeavored to create a regulatory structure

pdf/Natl%20Orgs%20Comments%20Underdeveloped%20Issues.101210.pdf (last visited April 11, 2011); see also Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 FCC Rcd 14986, 14987–88 ¶4 (2005) (the "Internet Policy Statement").

¹⁹ Open Internet NPRM at 13100 ¶88 ("We believe that the four Internet principles have performed effectively[.]")

²⁰ See Broadband For America, National Poll Finds More Than 75 Percent of Americans Agree the Internet is Working (Sept. 23, 2010), available at

http://www.broadbandforamerica.com/press-releases/national-poll-finds-more-75-percentamericans-agree-Internet-working (last visited April 15, 2011).

²¹ See Comcast v. FCC, supra n.

¹⁷ *See id.*

¹⁸ See Preserving the Open Internet Broadband Practices, Reply Comments of the National Organizations, GN Docket No. 09-191,WC Docket No. 07-52 (filed Oct. 12, 2010) ("National Organizations October 12, 2010 Open Internet Reply Comments") at 2, available at http://mmtconline.org/lp-

that is flexible enough to stimulate investment, growth, and job creation, while ensuring that the Internet remains both open and ubiquitously available. The *Open Internet Order* includes three Rules, along with several carve-outs and exceptions, all of which the Commission has deemed necessary in order to preserve the open Internet.²²

A. No Blocking

According to the Rules, subject to reasonable network management, providers of fixed broadband Internet access services are not allowed to block lawful Internet content, applications, services, or non-harmful devices.²³ Providers of mobile broadband Internet access services have a bit more latitude and are prevented only from blocking lawful websites or applications that provide voice or video telephony services.²⁴ These principles directly address the concerns about the potential for a provider to favor websites from which it derives a benefit. As Representative Anna G. Eshoo eloquently surmised, "[w]ithout some sort of supervision, large corporations can carve up the Internet into fast and slow lanes, charging a toll for content, and blocking innovators from entering the information superhighway."²⁵ Moreover, this rule formalizes widely accepted norms within the market for broadband Internet access services, which were initially encapsulated in the Commission's 2005 *Internet Policy Statement*.²⁶

B. Transparency

"Sunlight is the best disinfectant,"²⁷ ensuring that consumers have accurate information about their broadband offerings is vital to protecting consumers and maintaining a wellfunctioning broadband marketplace that encourages competition, innovation, low prices, and high-quality services.²⁸ To this end, the Commission, in its *Open Internet Order*, requires ISPs

²⁴ *Id*.

²⁵ Hon. Anna G. Eshoo, Member of Congress, Statement for Hearing on the Open Internet before the Energy and Commerce Subcommittee on Communications and Technology (February 11, 2011) available at

http://eshoo.house.gov/index.php?option=com_content&view=article&id=938:statement-for-hearing-on-the-open-Internet&catid=4) (last visited April 15, 2011).

²⁶ Open Internet Order at 17942 ¶62.

²⁷ See Open Internet NPRM, 24 FCC Rcd at 13108 ¶118 (citing Louis D. Brandeis, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 92 (1914)).

²⁸ Open Internet Order at 17936 ¶53 (arguing that "Effective disclosure of broadband providers' network management practices and the performance and commercial terms of their services

²² Open Internet Order ¶¶ 1- 42.

²³ *Id.* at 17954 ¶88.

to disclose their network management practices and performance characteristics (congestion management, application self-behavior, device attachment rules, and security), performance characteristics (service description and impact of specialized services), and commercial terms (pricing, privacy policies, and redress options).²⁹ Consumer and civil rights organizations both favor strong transparency requirements, while ISPs are generally less supportive.

C. No Unreasonable Discrimination

Initially, in its *Open Internet NPRM*, the Commission proposed a very rigid nondiscrimination rule, the adoption of which could have had extremely negative consequences for a number of user groups, including minorities.³⁰ Fortunately, the Commission elected to adopt a less rigid form of this rule, recognizing that "[a] strict nondiscrimination rule would be in tension with our recognition that some forms of discrimination, including end-user controlled discrimination, can be beneficial."³¹ Ultimately, the Rule adopted by the Commission prevents providers of fixed broadband Internet access services from "unreasonably discriminat[ing] in transmitting lawful network traffic over a consumer's broadband Internet access service."³² In other words, the Commission adopted this rule in an effort to prevent service providers from having the ability to "pick winners and losers on the Internet."³³

D. Reasonable Network Management

Each of these three Rules is subject to "reasonable network management," a notion that was included in the Commission's original *Internet Policy Statement* and that has long informed Commission action vis-à-vis broadband regulation. But, a standard of "reasonableness," by its very nature, is extremely subjective. Indeed, the Commission has long struggled to define exactly what constitutes reasonable network management. In the *Open Internet Order*, the Commission attempted to articulate a clear standard: "A network management practice is reasonable if it is appropriate and tailored to achieving a legitimate network management purpose, taking into account the particular network architecture and technology of the broadband Internet access service."³⁴ The Commission went on to provide examples of "legitimate network

promotes competition - as well as innovation, investment, end-user choice, and broadband adoption" in numerous ways).

²⁹ *Id.* at 17937 ¶54.

³⁰ See, e.g., National Organizations January 14, 2010 Open Internet Comments at p. 15.

³¹ Open Internet Order at 17948 ¶77.

³² *Id.* at 17954 ¶88.

³³ *Id.* at 17949 ¶78.

³⁴ *Id.* at 17952 ¶82.

management purposes." These included: "ensuring network security and integrity, including by addressing traffic that is harmful to the network; addressing traffic that is unwanted by end users (including by premise operators), such as by providing services or capabilities consistent with an end user's choices regarding parental controls or security capabilities; and reducing or mitigating the effects of congestion on the network."³⁵ Perhaps most critically, the Commission has committed itself to refining this standard and enforcement of it on a case-by-case basis, a dynamic that is essential given the "novelty of Internet access and traffic management questions" and "the complex nature of the Internet."³⁶

E. Carve-outs and Exceptions: Mobile Networks and Specialized Services

In addition to the three core rules, the *Open Internet Order* included several carve-outs and exceptions, two of which are discussed below.³⁷

First, an issue of contention is whether wireless networks would be subject to more relaxed standards than wireline networks. Wireless ISPs contend that spectrum scarcity requires greater network management flexibility.³⁸ Due to the limited capacity of wireless networks and the dynamic nature of wireless use, wireless network operators must constantly monitor and manage traffic on their networks in real time to address congestion and ensure service quality. Wireless broadband networks are also especially sensitive to a disruption or impairment in service resulting from heavy users or bandwidth intensive applications.³⁹ And due to the

³⁶ *Id.* at 17952 ¶83.

³⁷ Many of the other exceptions preserve the ability of broadband Internet access service providers to comply with other laws and obligations. More specifically, nothing in the new Rules "supersedes any obligation or authorization a provider of broadband Internet access service may have to address the needs of emergency communications or law enforcement, public safety, or national security authorities, consistent with or as permitted by applicable law, or limits the provider's ability to do so." *Id.* at ¶107. In addition, "Nothing in [the Rules] prohibits reasonable efforts by a provider of broadband Internet access service to address copyright infringement or other unlawful activity." *Id.*

³⁸ See National Organizations January 14, 2010 Open Internet Comments at 18; see also *Preserving the Open Internet Broadband Practices*, Comments of the Communications Workers of America, GN Docket No. 09-191,WC Docket No. 07-52 (filed Oct. 12, 2010) at 25, available at http://fjallfoss.fcc.gov/ecfs/document/view?id=7020916616 (last visited May 2, 2011) (explaining that "[w]ireless broadband services differ significantly from wireline broadband services in several respects" and "face spectrum capacity constraints and signal strength, interference and variability issues that wireline services do not.")

³⁹ National Organizations January 14, 2010 Open Internet Comments at 18.

³⁵ Id.

increasing technological capability and concomitant popularity of mobile broadband devices, network traffic is in the midst of a dramatic upsurge. Further, because of their increased reliance on wireless broadband,⁴⁰ minorities are more likely than other groups to be affected by rules that impede a wireless broadband provider's ability to manage network congestion or address other issues that negatively affect a consumer's wireless Internet experience.⁴¹

The *Open Internet Order* squarely addressed these issues by, among other things, recognizing that key technological differences between wired and wireless networks require separate but tailored standards of conducts for different platforms.⁴² The Commission determined that it was "appropriate to take measured steps at this time to protect the openness of the Internet when accessed through mobile broadband" and, as a result, it opted to "apply certain of the open Internet rules, requiring compliance with the transparency rule and a basic noblocking rule."⁴³

The *Open Internet Order* also created a new category of services – specialized services – that will, for the foreseeable future, be exempt from most of the Open Internet Rules.⁴⁴ However, this new class of services, which currently includes VoIP and IP-video and may eventually include telemedicine and other such applications, will be closely monitored by the Commission in order to "verify that [they] promote investment, innovation, competition, and end-user benefits without undermining or threatening the open Internet."⁴⁵ Ultimately, the Commission is concerned that, if left unchecked, service providers might invest only in lightly regulated specialized services rather than the network upgrades and other resources that are necessary to improve an open Internet platform.⁴⁶

Throughout the rulemaking process, civil rights groups maintained that as long as specialized services are made available to all consumers and businesses regardless of their race, color, religion, national origin, sex, or socio-economic status, the Commission should continue to allow broadband providers to offer these services. In addition, civil rights organizations wanted

⁴² Open Internet Order at 17956 ¶¶94-96.

⁴³ *Id.* at 17958 ¶96.

⁴⁴ *Id.* at17965 ¶¶112-14.

⁴⁵ *Id.* at 17966 ¶113. Voice Over Internet Protocol ("VOIP") is a technology that allows the consumer to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line. *See* FCC, Voice-Over Internet Protocol, available at http://www.fcc.gov/voip/ (last visited April 21, 2011).

⁴⁶ *Id.* at 19765 ¶112.

⁴⁰ See accompanying text infra.

⁴¹ See National Organizations January 14, 2010 Open Internet Comments at 18.

the Commission to leave ample room and flexibility for the types of incubation and incentive programs and progressive cost allocation mechanisms that are the real keys to closing that last pernicious gap in the digital divide. Thus, civil rights organizations urged the Commission to encourage broadband providers to innovate in terms of services, costs, and partnerships in a way that might stimulate additional broadband adoption and use.

Prohibiting content, application, and service providers from entering into voluntary arrangements for the paid provision of enhanced or prioritized services would remove a potential source of funding for additional network. Many analysts agree that allowing specialized services will result in a significant decrease in the retail price of broadband for ordinary end-user consumers.⁴⁷ For example, one study suggests that end-users could save as much as \$5 to \$10 per month as a result of network costs being subsidized through specialized services agreements.⁴⁸ This could lead to a total savings of \$3 to \$6 billion per year and would result in tens of millions of additional homes taking broadband service, particularly minorities and low-income groups.⁴⁹ This probable result cannot and should not be ignored.

IV. Assessing the Contours of Broadband Regulation on Minorities

The sweeping nature of the Commission's new Open Internet Rules require careful implementation and enforcement lest they inadvertently chill investment and innovation or otherwise negatively impact consumers. Indeed, the subjective nature of many of these Rules raises the possibility that overly narrow constructions of these principles could disproportionately impact marginalized user groups like minorities and minority entrepreneurs.

⁴⁸ See Hance Haney, "Network Neutrality Regulation Would Impose Consumer Welfare Losses" in *The Consequences of Net Neutrality* 49 (Nov. 19, 2009), available at http://www.theamericanconsumer.org/wp-content/uploads/2009/11/final-consequences-of-netneutrality.pdf (last visited April 15, 2011) (citing Gregory Sidak, "A Consumer-Welfare Approach to Network Neutrality Regulation of the Internet," *Journal of Competition Law and Economics*, Vol. 2, No. 3 at 464-66 (September 2006), available at http://jcle.oxfordjournals.org/cgi/content/abstract/2/3/349 (last visited April 15, 2011)).

⁴⁹See Hance Haney, "Network Neutrality Regulation Would Impose Consumer Welfare Losses" in *The Consequences of Net Neutrality* 49 (Nov. 19, 2009), available at http://www.theamericanconsumer.org/wp-content/uploads/2009/11/final-consequences-of-netneutrality.pdf (last visited April 15, 2011); see also National Organizations January 14, 2010 Open Internet Comments at 14-17; see also National Organizations October 12, 2010 Open Internet Reply Comments at 5-6.

⁴⁷ See, e.g. National Organizations January 14, 2010 Open Internet Comments at 14-17 (collecting authorities); *see also* National Organizations October 12, 2010 Open Internet Reply Comments at 5-6 (same).

As discussed in this section, these groups, as a result of their unique uses of broadband, are particularly vulnerable to major changes in broadband policy.

A. General Impact on Minority Consumers and Entrepreneurs

A growing body of literature has documented the importance of broadband to minority consumers and entrepreneurs. This technology, if properly harnessed, has the ability to connect users to resources and services that can deliver numerous benefits and cost-savings.

In particular, numerous studies show that, unlike other broadband technologies, minority use of wireless broadband devices outpaces that of White Americans. According to the Pew Internet & American Life Project, while 33 percent of White Americans access the Internet over their cell phones, 46 percent of African Americans and 51 percent of English-speaking Hispanic Americans do so.⁵⁰ The Joint Center for Political and Economic Studies ("Joint Center") reports similar statistics, finding that 50 percent of African Americans and 42 percent of Hispanic Americans access the Internet over cell phones, compared with 30 percent of White Americans.⁵¹ These statistics are significant because they illustrate that, due to financial and other considerations, minority households are more likely than others to have only a single, wireless on-ramp to the Internet.⁵² As such, whether and how the Commission's Rules apply to wireless networks is vital to ensuring that the minority user experience on these platforms is not negatively impacted.

Effective broadband policies are crucial to eliminating the adoption barriers that plague minority communities. The barriers that prevent more minorities from adopting broadband are multiple and vary according to income, education, and geographic location, among many other factors.⁵³ For example, cost remains a significant barrier keeping minorities and low-income consumers offline. The Pew Hispanic Center released a report that found that 85 percent of Whites have cell phones – compared to 79 percent of African Americans and 76 percent of

http://www.jointcenter.org/index.php/content/download/2991/18931/file/MTI_BROADBAND_REPORT_WEB.pdf (last visited April 27, 2011).

⁵⁰ See Aaron Smith, Pew Internet & American Life Project, *Mobile Access 2010* 16 (July 7, 2010), available at

http://www.pewInternet.org/~/media//Files/Reports/2010/PIP_Mobile_Access_2010.pdf (last visited April 15, 2011).

⁵¹ See Jon P. Gant, et al., Joint Center for Political and Economic Studies, *National Minority* Broadband Adoption: Comparative Trends in Adoption, Acceptance and Use 28-30 (Feb. 2010), ("Joint Center February 2010 Study") at 36 available at

⁵² See National Organizations January 14, 2010 Open Internet Comments at 18.

⁵³ Joint Center February 2010 Study.

Latinos. Just over half - only 58% - of those earning less than \$30,000 a year have cell phones.⁵⁴ Access to cell phones is part of a huge digital divide.

Policies also directly impact investment decisions by service providers. Regulations that decrease the incentive to investment in broadband infrastructure will negatively impact minority consumers and entrepreneurs. Innovative service offerings and funding sources will be crucial as network owners strive to develop their networks and meet the anticipated surge in demand for bandwidth. Achieving these objectives without raising prices is particularly important to price-sensitive minority communities.

Research suggests that, due to the deep and persistent racial wealth gap as well as racial disparities in income and unemployment status, minorities are particularly sensitive to increases in the retail prices of broadband services. Retail price increases can be enough to dramatically slow the rate of broadband adoption among minorities.⁵⁵ As such, one way to keep minority broadband adoption figures on a track toward closing the digital divide is for broadband providers to explore ways to equitably recover the majority of network deployment costs from the heaviest users.⁵⁶ Thus, the Commission must take care to preserve the ability of broadband providers to experiment with business models, voluntary arrangements, mentoring, and incubation programs. A recent study by the Phoenix Center revealed that a prohibition on specialized services could result in a loss of 300,000 jobs and that broadband investment would drop by 10 percent, costing the industry \$36 billion over five years, plus an additional \$100 billion in losses to related fields.⁵⁷ Taken together, these consequences would likely result in perpetuating or widening the digital divide.⁵⁸

⁵⁵ See Robert Shapiro and Kevin Hassett, A New Analysis of Broadband Adoption Rates by Minority Households (June 2010), available at

http://www.gcbpp.org/files/Academic_Papers/Shapiro%20file/New_Analysis_of_Broadband_Ad option_Shapiro_Hassett.pdf (last visited April 15, 2011).

⁵⁶ See id.

⁵⁷ See T. Randolph Beard, George S. Ford and Hyeongwoo Kim, Ph.D., Jobs, Jobs, Jobs: Communications Policy And Employment Effects In The Information Sector, Phoenix Center Policy Bulletin No. 25 (Oct. 2010), available at

http://www.phoenixcenter.org/PolicyBulletin/PCPB25Final.pdf (last visited April 15, 2011).

⁵⁸ See, e.g. Connecting America: The National Broadband Plan at Chapters 8, 9 (discussing the importance of affordability and increased deployment of broadband offerings to closing the digital divide).

⁵⁴ See Low Income Cell Phone Customers Can Think for Themselves, David Honig (Feb. 14, 2011) ("Low Income Cell Phone Customers Can Think for Themselves"), available at http://mmtconline.org/lp-pdf/DHonig%20HuffPost%20CellService%20021411.pdf (last visited Apr. 11, 2011).

B. Importance of Specialized Services to Minority Consumers

Advocates of specialized services maintain that these services provide an incentive for network providers to build out more aggressively, thereby increasing broadband access to the unserved and underserved and fostering more competition and choice. Strict application of Rules designed to limit or prevent these arrangements would ban solutions analogous to affirmative action remedies (whether based on race or class) in the form of special deals or pricing plans for low-income or unconnected users who otherwise could not afford to adopt broadband. In addition, policies that discourage price and service differentiation could increase the price of broadband for minorities and the poor and deter the investments that are needed to fully bridge the digital divide.⁵⁹ In the contemporary Internet ecosystem, there are multiple sources of cost recovery for the expenses associated with building out and maintaining our broadband networks. If Internet-based content, application, and service providers are willing to subsidize network expenses by entering into voluntary agreements with network providers, then the Commission should not prohibit these types of agreements.⁶⁰

Opponents of specialized services argue that the "true motive beneath ISPs desire to discriminate is not the possibility of earning new third-party revenues, but the protection of legacy voice and video services from the disruptive competition enabled by the open Internet."⁶¹ Some public interest organizations, such as Free Press, regard prioritized services as discriminatory practices that would "enable ISPs to reduce investment in the core market, and leverage power into the edge markets, further reducing investment there as well."⁶² Despite these assertions, experience has shown that the opposite is true.⁶³

⁶⁰ National Organizations October 12, 2010 Open Internet Reply Comments at 9.

⁶¹ See Preserving the Open Internet Broadband Practices, Comments of Free Press, GN Docket No. 09-191,WC Docket No. 07-52, (filed Jan. 14, 2010) ("Free Press January 14, 2010 Open Internet Comments") at 3, available at http://www.freepress.net/files/Free_Press_09-191_Comments.pdf (last visited April 11, 2011).

⁶² *Id.* at 4.

⁶³ "[F]ar from showing that specialized services actually pose a threat to consumers, the record compiled to date confirms the likely benefits of such

⁵⁹ See National Organizations January 14, 2010 Open Internet Comments at 14-23 (analyzing economic studies and explaining that the FCC's proposed nondiscrimination rule would significantly increase the price of broadband for consumers and impede the investments and deployment that are necessary to bridge the digital divide); National Organizations October 12, 2010 Open Internet Reply Comments at 5-7 (explaining that the FCC's proposed Nondiscrimination Rule would shift costs from large, Internet-based companies to end-user consumers and also discourage investment and deployment).

A recent controversy over the efficacy of price differentiation is illustrative of the type of controversy likely to arise over specialized services.⁶⁴ To provide services to low-income consumers, wireless carrier MetroPCS offered customers three different VOIP-enabled Internet packages that offered free Internet access to any lawful website.⁶⁵ The Center for Media Justice opposes such packages, claiming that they confuse low-income consumers and that it is "un-American to give low-income communities substandard Internet service that creates barriers to economic opportunity and democratic engagement."⁶⁶ David Honig (co-author of this paper) contended that giving low-income and unconnected consumers more pricing options will advance adoption, while disallowing \$40 and \$50/month options for users would result in missed opportunities to increase adoption.⁶⁷

C. Importance of Specialized Services to Minority Businesses

Misapplication of the Commission's new Rules could prohibit the offering of enhanced or prioritized services that have proven to be of enormous value to minority businesses. Indeed, the ability to partner with carriers to reach niche audiences such as minority and multilingual consumers could be called into doubt by an overly narrow reading of the Rules. Thus, the Commission should clarify that Internet access providers may continue to offer these types of services – including incubation and incentive programs and progressive cost allocation mechanisms – provided they are offered in a non-discriminatory manner (*i.e.* made available to all consumers and businesses regardless of their race, color, religion, national origin, sex, or socio-economic status). Such an approach would have kept the focus on protecting the interests

⁶⁴ Price differentiation is expressly permitted. *See Open Internet Order*, ¶72 ("[P]rohibiting tiered or usage-based pricing and requiring all subscribers to pay the same amount for broadband service, regardless of the performance or usage of the service, would force lighter end users of the network to subsidize heavier end users. It would also foreclose practices that may appropriately align incentives to encourage efficient use of networks. The framework we adopt today does not prevent broadband providers from asking subscribers who use the network less to pay less, and subscribers who use the network more to pay more" (citations omitted)).

⁶⁵ See Low Income Cell Phone Customers Can Think for Themselves.

⁶⁶ See In Defense of Sub-Standard Cell Phone Service: Big Media Gets Rescued. Again, Malkia A. Cyril (Feb. 8, 2011), available at http://www.huffingtonpost.com/malkia-a-cyril/in-defense-of-substandard_b_820028.html (last visited May 4, 2011).

⁶⁷ See Low Income Cell Phone Customers Can Think for Themselves.

services.") *See Preserving the Open Internet; Broadband Industry Practices*, Comments of Time Warner, (filed Oct. 12, 2010), GN Docket No. 09-191, WC Docket No. 07-52, at 9, available at <u>https://prodnet.www.neca.org/publicationsdocs/wwpdf/11410twc.pdf</u> (last visited May 7, 2011).

of consumers, encouraging innovation and investment by network providers, and ensuring that entrepreneurs have a fair shot at competing against established competitors.

Specialized services are also important because of the competitive and economic opportunities they provide for minority and women-owned businesses, also known as MWBEs. MWBEs and socially and economically disadvantaged businesses ("SDBs") are currently benefiting from the availability of specialized services, which enable them to obtain high-quality broadband services that satisfy their communication needs. Restricting, or prohibiting, these agreements, which have not been shown to have any harmful effects, would not only change how broadband offerings are provided, but would hurt these disadvantaged businesses while serving no legitimate public policy purpose.⁶⁸ Moreover, arbitrarily proscribing the right of minority consumers and disadvantaged businesses to enter into innovative and pro-consumer business arrangements with their broadband providers would represent a marked departure from the climate of experimentation that has made the Internet so successful.⁶⁹

D. Importance of Specialized Services to Broadband Deployment

The economic evidence demonstrates that slowing the development of specialized services would deter the investments that are needed to increase the availability of next-generation, high-speed broadband networks.⁷⁰ Prohibiting specialized services would shift costs from large, Internet-based companies to consumers in the form of higher costs of service, consequently impeding the generation of revenues that could be used for the investment and deployment necessary to close the digital divide. The end result is a negative impact on job growth and economic opportunities, as well as small or start-up businesses. Prohibiting specialized services would hinder MWBEs from competing effectively with established Internet-based companies.

V. Civil Rights Concerns for Broadband Policy Going Forward

Civil rights organizations agree that an open Internet is vital to democracy – and at the same time, a *diverse* Internet and bridging the digital divide must become top policy priorities. The Commission should not regulate broadband service in a manner that would prevent carriers

⁶⁸ See Letter from David Honig, President and Executive Director, Minority Media and Telecommunications Council, to Hon. Julius Genachowski, Chairman, FCC, GN Docket No. 09-191, WC Docket No. 07-52 (filed July 28, 2010) ("MMTC Open Internet July 28, 2010 Letter"); *see also* National Organizations October 12, 2010 Open Internet Reply Comments at 5-11.

⁶⁹ National Organizations October 12, 2010 Open Internet Reply Comments at 3.

⁷⁰ *Id.* at 6-7 (collecting economic studies); *see also* National Organizations January 14, 2010 Open Internet Comments at 19-23 (same).

from offering partnerships, mentoring, incubation, and price discounts to new entrants – particularly multicultural digital entrepreneurs who are seeking to get a foothold online from which they can compete with entrenched companies. The Rules should protect consumers and small and disadvantaged businesses with respect to their entire online experience and not jeopardize their interests. Yet, even though the Commission's Open Internet Rules, if properly interpreted and applied, could further these benefits, several core concerns remain.

One of these concerns ensuring that broadband policy works to close the digital divide. In the public interest community, a friendly disagreement has developed over whether to support strict or relaxed application of the new Rules related to network management and specialized services. Most of the national civil rights organizations would like rules that preserve the climate, and expand adoption and use of the Internet as it is being used now – as an open arena without the barriers and obstacles that women and minorities have faced within other industries.

Closing the digital divide and educating all Americans on how to effectively use and access broadband should be the Commission's top priority. Broadband policy done right has the potential to be a powerful force for positive change.⁷¹ As Chairman Julius Genachowski remarked, "[m]ultiple studies tell us the same thing – even modest increases in broadband adoption can yield hundreds of thousands of new jobs."⁷² Indeed, it is a central principle of the Commission's National Broadband Plan that access to broadband will be increasingly significant to everything from education and energy use to employment, healthcare, and self-governance. As the Plan put it, "[u]ntil recently, not having broadband was an inconvenience. Now, broadband is essential to opportunity and citizenship."⁷³

It is impossible to exaggerate how important increased broadband adoption is to empowering minorities, creating jobs and growing the economy. The recent recession has had a particularly devastating impact on minorities. Recent figures released by the Bureau of Labor Statistics show that although the unemployment rate for White Americans is 7.9 percent, the rate

⁷¹ See Framework for Broadband Internet Services, Comments of the National Organizations, GN Docket No. 10-127 (filed July 16, 2010) (the "National Organizations Legal Framework Comments") at 8-12 (discussing studies that address the potential impact the FCC's net neutrality rule could have on creating jobs and growing the economy).

⁷² Prepared Remarks of Chairman Hon. Julius Genachowski, Chairman, FCC, Minority Media and Telecommunications Council Access to Capital and Telecommunications Conference (July 20, 2010) at 1, available at

http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0720/DOC- 299976A1.pdf (last visited April 15, 2011).).

⁷³ See National Broadband Plan at 5.

for minorities is much higher, with African Americans at 15.5 percent and Hispanic Americans at 11.3 percent.⁷⁴

When compared to the handful of alleged net neutrality violations, the widespread evidence of discriminatory employment trends in the high tech and media industries makes it clear where our federal resources should be placed. A less expansive approach to crafting these Rules might have freed the Commission's resources to combat the more pressing racial discrimination and exclusionary hiring and promotion practices of certain Silicon Valley high tech companies. It is well documented that several Silicon Valley firms have worked hard to hide data about the race and gender of their workforce and that the "unique diversity of Silicon Valley is not reflected in the region's tech workplaces – and the disparity is only growing worse."⁷⁵ Data obtained by the San Jose Mercury News revealed troubling trends about the dwindling numbers of minorities employed by premier digital economy companies. The San Jose Mercury News reported that U.S. Department of Labor data "shows that while the collective work force of 10 of [Silicon Valley's] largest companies grew by 16 percent from 1999 to 2005, an already small population of [B]lack workers dropped by 16 percent, while the number of Hispanic workers declined by 11 percent. By 2005, only about 2,200 of the 30,000 Silicon Valley-based workers at those 10 companies were [B]lack or Hispanic. In addition, among the roughly 5,900 managers at those companies in 2005, about 300 were either [B]lack or Hispanic - a 20 percent dip from five years earlier."⁷⁶ Such marked and sustained decreases in minority employment indicate a systemic problem in our high tech industries.

Under the Communications Act, the Commission is charged with regulating "communication by wire and radio so as to make available, so far as possible, to all the people of

⁷⁶ Mercury News II.

⁷⁴ See U.S. Bureau of Labor Statistics, "Employment Situation Summary" (April 1, 2011), available at http://www.bls.gov/news.release/empsit.nr0.htm (last visited May 3, 2011).

⁷⁵ Mike Swift, *Blacks, Latinos And Women Lose Ground At Silicon Valley Tech Companies*, SAN JOSE MERCURY NEWS (Feb. 13, 2010) ("Mercury News I"), available at http://www.mercurynews.com/topstories/ci_14383730 (last visited April 15, 2011); *see also* Mike Swift, *Five Silicon Valley Companies Fought Release Of Employment Data, And Won*, SAN JOSE MERCURY NEWS (Feb. 14, 2010) ("Mercury News II"), available at http://www.mercurynews.com/search/ci_14382477 (last visited April 15, 2011) ("[T]he Labor Department accepted arguments filed by lawyers for Google, Apple, Yahoo, Oracle and Applied Materials that release of the information would cause commercial harm"); *see also* Owen Thomas, Google, Don't Be Hypocritical, NBCBayArea.com (Feb. 15, 2010), available at http://www.nbcbayarea.com/news/tech/Google-Dont-Be-Hypocritical-84405122.html (last visited April 15, 2011) ("Google has fought to hide data about the race and gender makeup of its workforce.")

the United States, *without discrimination on the basis of race, color, religion, national origin, or sex.*⁷⁷ Yet, as MMTC has previously explained, the Commission's EEO enforcement program is a mere shadow of its former self.⁷⁸ Indeed, when comparing Commission EEO actions in the time period from 2004-2007 with similar actions between 1994 and 1997, we see that the size of the Commission's EEO docket is down 96 percent (from 251 cases from 1994-1997 to 10 cases from 2004-2007), and the total forfeiture amounts imposed annually have also decreased 96 percent (from \$312,250 in 1994-1997 to \$12,125 in 2004-2007).⁷⁹

The Commission cannot continue to turn a blind eye to these and other discriminatory practices that are not being self-corrected by the industry and cry out for federal action.⁸⁰ While crafting its broadband policies, the Commission should also further minority participation throughout the broadband and high tech sectors of the communications industry.

⁷⁹ See MMTC May 22, 2008 Employment Data Comments at 8; see also Minority Media and Telecommunications Council, MMTC Road Map For Telecommunications Policy 22-23 (July 21, 2008) (discussing the causes of minority underrepresentation in television and radio), (available at http://mmtconline.org/lp-pdf/MMTC-Road-Map-for-TCM-Policy.pdf (last visited April 15, 2011).

⁸⁰ In a February 16, 2010 letter to FCC Chairman Genachowski, 23 civil rights organizations identified several pending petitions, applications, and other proceedings related to diversity in the media and telecommunications industries on which the Commission has failed to act. *See* Letter from David Honig, on behalf of to 23 national organizations, to Hon. Julius Genachowski, Chairman, Federal Communications Commission, GN Docket No. 09-51 *et al.* (Feb. 16, 2010), available at http://mmtconline.org/lp-pdf/FCC%20CivilRightsLtr%20021610.pdf (last visited May 2, 2010). The Commission has since taken steps to address this issue. Specifically, on March 22, 2011, the Commission commenced enforcement of the advertising nondiscrimination rule. *See* Letter from David Honig, on behalf of 23 national organizations, to Hon. Julius Genachowski, Chairman, Federal Communications Commission, MB Docket 07-294 (Apr. 14, 2011), available at http://mmtconline.org/lp-pdf/Advt%20Nondiscrimi%20Ltr%200401411.pdf (last visited May 2, 2010).

⁷⁷ 47 U.S.C. §151 (2006) (emphasis added to identify language added as part of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996)).

⁷⁸ See Letter from David Honig, President and Executive Director, Minority Media and Telecommunications Council, to Hon. Julius Genachowski, Chairman, Federal Communications Commission, MB Docket 98-204 (June 29, 2010), available at <u>http://mmtconline.org/lppdf/MMTC%20EEO%20SuspensionReq%20062910.pdf</u>) (last visited April 24, 2011); *see also* Comments of the Minority Media and Telecommunications Council at 8-10, MB Docket No. 98-204 (filed May 22, 2008) at 8-10 ("MMTC May 22, 2008 Employment Data Comments"), available at <u>http://mmtconline.org/lp-pdf/MMTC-EEO-395-Comments-052208.pdf</u> (last visited May 2, 2010.

VI. <u>Recommendations</u>

While preserving an open Internet is one means of bridging the digital divide, it is not and must not be the only way. The net neutrality debate has diverted attention and vital resources away from much more pressing consumer protection and discrimination issues for which federal intervention is badly needed. As a consequence, the Commission has not made more progress toward achieving key civil rights goals.⁸¹ To close the digital divide, the Commission could take these two steps:

- 1. In light of the dramatic increases in wireless network usage that are already occurring, the Commission should be focused on finding ways to promote wireless broadband deployment and reliability. The National Broadband Plan's goal of identifying 500 MHz of additional spectrum for wireless broadband is one such effort that, if realized, will have a tremendous beneficial effect for minority broadband users.⁸²
- 2. Rather than limiting the sorts of specialized services offered and voluntary agreements struck by broadband providers, the Commission should seek to create incentives for broadband providers to use these tools to promote broadband adoption by minorities and enhance opportunities for minority and women owned businesses online. For example, the Commission could institute a New Entrant Digital Entrepreneur Incentive Program, partly modeled on the Community Reinvestment Act, which would incentivize partnerships between Internet access providers and the new-entrant content providers,⁸³

⁸² See National Broadband Plan at 84; see also International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act, Comments of Civil Rights Organizations, GN Docket Nos. 09-47, 09-51, 09-137 (filed Dec. 22, 2009) (discussing the importance of wireless broadband to minorities and highlighting the need for additional spectrum for wireless broadband), available at <u>http://mmtconline.org/lp-</u> ndf/CP.Os% 20Spectrum% 20Comments% 20122200 ndf (het wigited May 2, 2010).

pdf/CROs%20Spectrum%20Comments%20122209.pdf (last visited May 2, 2010).

⁸³ According to a landmark study of broadband adoption by the Joint Center for Political and Economic Studies, "Higher income minorities are also more likely to embrace online content and

⁸¹ See, e.g. Harold Feld, *Genachowski's Fast Fading Star* — And How He Can Still Salvage His Term As Chairman, Wetmachine.com (Aug. 3, 2010), available at http://tales-ofthe-sausage-factory.wetmachine.com/content/genachowskis-fast-fading-star-and-how-he-canstill-salvage-histerm-as-chairman (last visited April 15, 2011); Howard Buskirk & Jonathan Make, *Genachowski Moving Slower than Expected on NBP Recommendations*, 30 COMMUNICATIONS DAILY 1 (Sept. 1, 2010); Amy Schatz, FCC Chief Concedes Slow Pace, THE WALL STREET JOURNAL (Sept. 28, 2010) (available at

http://online.wsj.com/article/SB10001424052748703694204575518321625294434.html (last visited April 15, 2011).

that produce much of the culturally relevant content necessary to spur minority adoption, application, and service providers.⁸⁴ A relaxed default network management paradigm, premised on a broadband provider's record of activity to incubate new digital entrepreneurship, would allow broadband service providers to retain the operational flexibility they require while assuring the Commission that important pro-consumer and pro-competition goals were being served.

VII. Conclusion

Broadband policy will influence our society for years to come, setting the stage for our economic growth and civic participation. Our nation cannot afford for policy makers to get this wrong - through misguided rules or implementation. The debate about net neutrality and the Commission's Open Internet Rules has had the unfortunate consequence of dividing the public interest community. However, social justice advocates and scholars should unite to encourage the Commission to turn its attention to building digital equality and closing the digital divide.

* * * * *

applications that not only improve quality of life, but also facilitate robust connections with others online." Joint Center February 2010 Study, p. 1.

⁸⁴ See National Organizations October 12, 2010 Open Internet Reply Comments at 16-18.