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December 13, 2010

Chairman Julius Genachowski
Commissioner Michael J. Copps
Commissioner Robert M. McDowell
Commissioner Mignon Clyburn
Commissioner Meredith Attwell Baker
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: *Preserving the Open Internet, GN Docket No. 09-191; Broadband Industry Practices, WC Docket No. 07-52; Framework for Broadband Internet Service, GN Docket No. 10-127*

Dear Chairman Genachowski and Commissioners:

We write today to express concern with the Commission's pending proposal to depart from its own long-standing principles of technological neutrality by allowing mobile broadband carriers to engage in arbitrary blocking of content and applications.¹ We are concerned not only with the negative impact this decision will have on the Internet ecosystem, but also how this policy undermines and contradicts the Commission's overall broadband policy framework.

The Commission has placed substantial emphasis on wireless connections as important and emerging competitors in the broadband market. If the Commission fails to preserve the openness of wireless platforms, its active choice to close those platforms will ripple into the Internet ecosystem, resulting in more restricted Internet access than we have ever seen before. This policy choice is dangerous and arbitrary, and it has no defensible basis in engineering, law or economics. It is a policy designed to solve a political problem at the expense of the public interest. In this letter, we highlight the problems with this form of asymmetric regulation. We also suggest a coherent policy framework that preserves the principle of technological neutrality but enables the Commission to tailor the applications of its rules to particular circumstances.

¹ This letter's characterization of the draft Order in the Open Internet proceeding is based on numerous widely publicized press reports, each based on unattributed sources both within and external to the Commission. Many reports state that the draft Order's treatment of wireless networks mirrors that in never-introduced legislation by Rep. Henry Waxman (D-Calif.), filed in this proceeding earlier this month. See Letter from Henry A. Waxman, December 1, 2010.

Asymmetric regulation does not comport with either the Communications Act or the Commission’s long-standing policy of technological neutrality. Indeed, it contradicts Chairman Genachowski’s own stated preference for technology-neutral policies.

Both Congress and the Commission prefer technologically neutral communications policy. Specifically, both bodies recognize that differential treatment can distort markets, create arbitrage, and stifle competition. For example, in charging the Commission with the duty to encourage the deployment of advanced telecommunications capability, Congress specifically noted that “the term ‘advanced telecommunications capability’ is defined, **without regard to any transmission media or technology**, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications **using any technology**” (*emphasis added*).² In 1996, Congress clearly endorsed a technologically neutral approach to broadband policy.

The Commission, too, has a long, bipartisan history of promoting technological neutrality. For example, as the Commission undertook the task of implementing the 1996 Telecommunications Act, it stated, “[t]echnological neutrality will allow the marketplace to direct the advancement of technology and all citizens to benefit from such development.”³ Chairman Kevin Martin made technological neutrality a central guiding principle to his policy platform. In 2005, Chairman Martin stated:

[W]e [now] see[] cable companies providing voice service, telephone companies beginning to provide video services, and wireless companies providing Internet access services...What is the key to ensuring a bright future for these integrated service offerings? From a regulatory perspective, I believe that it is technological and competitive neutrality. As I have said on several occasions, all providers of the same service must be treated in a similar manner regardless of the technology that they employ.⁴

This policy continues with the current Commission. In formulating its long-term goals for broadband, the Commission has stated that “[r]egulatory policies must promote technological neutrality, competition, investment, and innovation.”⁵ On the exact issue of how to apply nondiscrimination protections to wireless network, Chairman Genachowski has been quite clear. In a September 2009 speech, he said:

Even though each form of Internet access has unique technical characteristics, they are all are different roads to the same place. It is essential that the Internet itself remain open, however users reach it. The [open Internet principles] apply to the Internet however

² 47 U.S.C. § 1302(a).

³ *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd. 8776, ¶ 49 (1997).

⁴ Kevin J. Martin, Chairman, FCC, Remarks at TELECOM 05 Conference, United States Telecom Association, (Oct. 26, 2005).

⁵ See Federal Communications Commission Strategic Goals — Broadband, <http://www.fcc.gov/broadband/> (2010).

accessed, and I will ask my fellow Commissioners to join me in confirming this.⁶

When releasing the *Notice* in this proceeding, the Chairman reiterated this commitment to technological neutrality, stating, “openness is essential for the Internet however it’s accessed. It doesn’t make sense to have one Internet when your laptop is plugged into a wall and another when accessing the Internet through a wireless modem.”⁷

In the Internet context, technological neutrality impacts investment incentives on both the network and applications sides of the market. A policy that allows wireless data providers to arbitrarily block certain applications or engage in discriminatory traffic management will result in these carriers under-investing in network capacity and over-investing in technologies designed to create artificial scarcity in order to facilitate rent-seeking behavior. This disparate treatment and the implicit authorization of discriminatory rent-seeking behavior in a concentrated market will further shift investment away from wireline networks, undermining the Commission’s goal of bringing broadband to all Americans.

Further, the Commission’s explicit authorization of outright blocking of applications will have drastic negative consequences for innovation in the mobile applications space. **For the first time, the Commission will be setting a policy of innovation *only* with permission.** Moreover, innovators must go through a very limited number of wireless providers in order to bring their products to market. Allowing wireless network operators to exert this level of control over a general-purpose infrastructure will cause great harm to innovation, which in turn will reduce the value of the service and harm overall investment.⁸ Had the Commission abandoned nondiscriminatory access requirements at the dawn of the Internet age, many innovations of the last twenty-plus years may never have come to market.

Disparate treatment of wireless networks undermines the Commission’s entire broadband competition policy.

To the extent that the Commission has a policy framework to address the suboptimal competition problems in the oligopoly broadband market, that policy rests on facilitating greater intermodal competition. But with the *Open Internet Order*, the Commission appears poised to undermine any hope that wireless networks can serve as an adequate substitute to wireline networks.

Since the adoption of the 2003 *Triennial Review Order*, the Commission has relied on facilities-

⁶ Julius Genachowski, Chairman, FCC, Preserving a Free and Open Internet: A Platform for Innovation, Opportunity, and Prosperity, Remarks Before the Brookings Institution (Sept. 21, 2009), *available at* http://www.brookings.edu/~media/Files/events/2009/0921_broadband_communications/20090921_genachowski_prepared.pdf.

⁷ See Statement of Chairman Julius Genachowki, *Preserving the Open Internet*, GN Docket No. 09-191; *Broadband Industry Practices*, GN Docket 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd. 13064 (2009).

⁸ See generally BARBARA VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION* (2010).

based, or intermodal, competition to drive competition among broadband providers.⁹ Industry participants require significant capital and experience significant fixed costs, which made this a risky policy — indeed, the market for facilities-based broadband access has all the features of a natural monopoly. As a result, the Commission’s approach made risky policy. History shows, and the National Broadband Plan confirms, that it is highly unlikely that greater wired competition will come to the U.S. broadband market, and as the market moves towards greater speeds, competition in the wired space will likely decrease.¹⁰

The current Commission, like those before it, seems reluctant to even explore the need for a comprehensive competition policy framework. Thus, to the extent that consumers are to see any relief from the harms of this duopoly market, that hope has to come from the often-touted wireless “third pipe.” Chairman Genachowski summed up this policy platform earlier this year in an interview with *Wired*:

There are reasons, absolutely, to be concerned [about the lack of competition]. The barriers to entry in this area are high. Building networks is very expensive; you can’t do it as an entrepreneur in your garage. A reason to be hopeful lies in the potential of global broadband to provide more competition throughout the ecosystem. As the next generation of mobile broadband rolls out, if we can get it to roll out quickly, if it rolls out universally, and if it hits high enough speeds, it could become a legitimate substitute for people who have wired broadband, in the way that wireless telephone service is becoming a substitute for wired, and that’s providing some competition.¹¹

This policy of hope that the increased availability of wireless broadband access will cure our competition ills is nothing new.¹² The National Broadband Plan did not predict whether or not

⁹ See *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98, 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16978 (2003) (*Triennial Review Order*).

¹⁰ See Federal Communications Commission, *Connecting America: the National Broadband Plan* 37 (2010) (*National Broadband Plan*), available at <http://download.broadband.gov/plan/national-broadband-plan.pdf> (“Given that approximately 96% of the population has at most two wireline providers, there are reasons to be concerned about wireline broadband competition in the United States. Whether sufficient competition exists is unclear and, even if such competition presently exists, it is surely fragile.”) On the subject of future competition for high-capacity services, the plan notes that “in areas that include 75% of the population, consumers will likely have only one service provider (cable companies with DOCSIS 3.0-enabled infrastructure) that can offer very high peak download speeds.” *Id.* at 42.

¹¹ Steven Levy, *The Wired Interview: FCC Chair Julius Genachowski on Broadband, Google and His iPhone*, WIRED, March 4, 2010.

¹² Just as Chairman Genachowski tells consumers that 4G wireless networks will emerge as competitors to wired broadband, prior Commissioners said the same thing about 3G networks. See, e.g., *Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, WT Docket No. 07-53, Declaratory Ruling, 22 FCC Rcd. 5901, ¶ 55 (2007).

wireless networks could offer viable competition to wired networks, but it did make many recommendations that would facilitate this possibility. Indeed, this is a major motivating factor behind the Plan's spectrum policy recommendations.¹³

But the Plan is firm in its conclusion that the viability of wireless-wireline competition is not only dependent upon additional capacity, but on how the owners of wireless networks offer their services. The Plan stated:

Whether wireless broadband, either fixed or mobile, can compete with wireline broadband is an important question in evaluating the status of broadband services competition. The answer depends on how technology, costs and consumer preferences evolve, **as well as on the strategic choices of firms that control wireline and wireless assets, including firms that offer both fixed and mobile broadband.**¹⁴

This last point is critical. As the Commission has found,¹⁵ two companies — Verizon and AT&T — dominate the mobile wireless data market. These firms also offer fixed broadband services and own substantial middle mile and backbone transport capacity. As a result, they have tremendous incentives to see that their wireless services remain pure complements, rather than substitutes, to wired services. To that end, if given regulatory approval through the Commission's *Open Internet* order to turn their mobile services into highly managed access networks that prioritize, block and degrade applications otherwise available on the open Internet, these companies will surely do so.

If the Commission believes wireless networks, particularly 4G networks operated by Verizon and AT&T, should develop as viable competitive substitutes for wired networks, then it must compel these operators to offer the same Internet experience to consumers as that offered by wired service providers. If the Commission fails to require regulatory parity under the *Open Internet* rules, then it will undermine its own competition policy and strand consumers in the stagnant, uncompetitive duopoly broadband market.

The technological differences between wired and wireless networks do not justify separate treatment under the law.

In the record of this proceeding, opponents of applying Net Neutrality rules to wireless networks have cited two principal arguments. First, they argue that technological differences between the two broad categories of wired and wireless networks justify a wireless exclusion, and second,

¹³ See *National Broadband Plan* at 43 (“The federal government, including the FCC, the National Telecommunications and Information Administration (NTIA) and Congress, should make more spectrum available for existing and new wireless broadband providers in order to foster additional wireless-wireline competition at higher speed tiers.”).

¹⁴ *Id.* at 40 (*emphasis added*).

¹⁵ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fourteenth Report, 25 FCC Rcd. 11407 (2010) (*Fourteenth Report*).

they argue that supposed engineering limitations resulting from the finite capacity of wireless spectrum make it impossible for wireless network operators to comply with neutrality principles. But these differences are not so great that they justify separate nondiscrimination rules under the law. Just as wired and wireless networks differ, so too do individual wired networks. Last-mile cable modem networks have radically different network architectures than last-mile DSL networks, and customers of cable networks, like those of wireless networks, share limited bandwidth in the last mile. But differences exist even within individual technologies. A VDSL network supported with ample second mile bandwidth would be far less capacity-constrained than a first-generation ADSL network supported by a TDM-based special access circuit.

So while it is true that in *some* instances that the capacity of wireless networks can be more constrained than the capacity of a wired network, the FCC's proposed "reasonable network management" policy can account for these differences. A Net Neutrality rule of general application could include a flexible definition of "reasonable network management" that allows wireless carriers and the FCC to make allowances for capacity limitations in some existing wireless networks. This solution ensures provider flexibility without the threat of fragmenting the Internet into a more open wired system, and a more closed wireless one.

It would be arbitrary and capricious for the Commission to permit economically motivated discrimination on wireless networks while rightly banning such harmful practices on wireline networks.

If the Commission chooses to abandon the principle of technological neutrality, then at a minimum it must ensure its policy regime is consistent with the underlying rationale for disparate treatment — engineering limitations inherent in wireless networks. As a result, any relief from the rules must be based on these actual network limitations, not economic motivations to discriminate. At a minimum, 4G wireless network operators should be required to comply with the same rules that apply to wireline network operators, as they are in many cases far less capacity constrained than some existing DSL networks. Recent real world tests of Verizon's 4G LTE service show it outperforming wired network capabilities.¹⁶

To the extent that a particular 3G wireless network is shown to require special treatment, it should be subjected to a strict no-blocking rule similar to that placed on the C-Block spectrum. To the extent that a particular network is truly capacity limited, the Commission should only allow a 3G carrier in certain circumstances to engage in engineering-motivated discrimination, and prohibit all forms of economic-motivated discrimination on all wireless networks. There is simply no technical reason for AT&T to allow its own remote DVR application to run freely on its wireless network but degrade all other streaming applications.

¹⁶ Avram Piltch, *Is 4G Good Enough to Replace Your Home Internet?*, LAPTOP MAGAZINE, Dec. 7, 2010, available at <http://blog.laptopmag.com/is-4g-good-enough-to-replace-your-home-internet> (showing speed test results calculated in Manhattan, which put Verizon LTE download speeds at 23.1 Mbps and upload speeds at 6.7 Mbps, higher than Time Warner Cable's home broadband service, which achieved 17.2 Mbps down and only 0.5 Mbps up).

Differential treatment cannot be justified on the basis that there may be marginally more competition in the mobile wireless market at the national level.

Substantial academic studies have demonstrated that nondiscrimination rules make good policy even in a competitive market for broadband access.¹⁷ Nevertheless, the idea that a more competitive environment for mobile broadband services somehow justifies differential treatment persists among the litany of illusions raised by the mobile broadband industry. To be sure, the state of competition in the *fixed* broadband market is dire. Comparatively, there is indeed greater consumer choice in the mobile wireless market, particularly for consumers who do not currently have service and who do not have any particular preferences for phones or other devices. But in practice, many policy and market obstacles exist that prevent the greater choice of providers from translating into effective competition over service quality and price. As a result, there is no indication that consumers may truly vote with their pocketbooks for open rather than closed connections.

High on the list of obstacles to effective competition are standard industry practices to discourage consumers from switching carriers, including early termination fees, exclusive deals for devices, band-specific specifications preventing interoperability, and technological locks preventing device portability and attachment. Ever-rising early termination fees — as high as \$350 — bear little if any relation to sunk costs by providers, and serve primarily as penalties to discourage churn.¹⁸ Exclusive deals for the most popular devices, particularly smartphones, artificially limit consumer choice of both devices and carriers.¹⁹ Disputes over device specifications within the 700 MHz band risk further limitations to consumer choice of both devices and services by preventing the development of interoperable smartphones that could be used with multiple wireless carriers.²⁰ By artificially tying devices to specific networks, these practices restrict meaningful consumer choice of networks and limit the potential benefits of competition.

Separate from these hurdles are costs of entry and growth imposed on competitors, whether by technical limitations or (more nefariously) by the incumbents themselves. This Commission has

¹⁷ *E.g.* BARBARA VAN SCHEWICK, INTERNET ARCHITECTURE AND INNOVATION 255-64 (2010); *see generally* Comments of Free Press, *A National Broadband Plan for our Future*, GN Docket No. 09-191, *Broadband Industry Practices*, WC Docket No. 07-52 (Jan. 14, 2010), at 45-53.

¹⁸ *See, e.g.*, Reply Comments of Consumer Federation of America, Consumers Union, Free Press, Media Access Project, New America Foundation, and Public Knowledge, WT Docket No. 09-66 (July 13, 2009), at 20 (referencing statistics showing the average subsidy of a handset in 2008 to be \$14.33, far less than the typical ETF of \$175, as well as indications that ETF amounts are set by psychological indicia rather than cost).

¹⁹ *See, e.g.*, Comments of Consumer Federation of America, Consumers Union, Free Press, Media Access Project, New America Foundation, and Public Knowledge, WT Docket No. 09-66 (June 15, 2009), at 15-16 (*Public Interest CMRS Competition Comments*).

²⁰ *See* 700 MHz Block A Good Faith Purchaser Alliance Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operating on All Paired Commercial 700 MHz Frequency Blocks, RM No. 11592 (filed Sept. 29, 2009).

been quick to point to the importance of spectrum for broadband growth;²¹ however, it has been slow to acknowledge the disparity in spectrum holdings that its recent policies have produced. Removing spectrum caps and failing to strictly apply spectrum screens has led to massive consolidation in spectrum holdings;²² purchasing sufficient spectrum to compete with Verizon and AT&T, with their expanded assets, is beyond the means of many competitors. Even when competitors acquire adequate spectrum, however, they are often dependent for backhaul connectivity on special access services leased by vertically integrated providers Verizon and AT&T.²³ Recent deregulation of special access services has led to skyrocketing prices for competing wireless service providers, and substantially higher profits (and less risk of competition) for Verizon and AT&T.²⁴

These obstacles to competition are not theoretical: They have translated into a concentrated, arguably broken, market. As noted, the mobile wireless market is increasingly dominated by just two providers: AT&T and Verizon.²⁵ The Commission's most recent report on the status of competition in the wireless industry provides ample supporting data for this observation.²⁶ As the Fourteenth Report observed, "One widely-used measure of industry concentration indicates that concentration has increased 32 percent since 2003 and 6.5 percent" between 2007 and 2008, "the most recent year for which data is available."²⁷ Concentration levels in the report exceed those of previous years, and far exceed HHI levels considered "highly concentrated" in traditional antitrust evaluations. AT&T and Verizon provide service to well over half the subscribers in the market, and have recently captured a far larger share of the growth. In 2008, the entire industry gained between 14.5 and 15 million net new subscribers, 12.3 million of which went to AT&T and Verizon.²⁸ Churn rates for AT&T and Verizon are half those of the other two national providers, Sprint and T-Mobile.²⁹ AT&T and Verizon also report substantially higher profits than their competitors.³⁰

²¹ See, e.g., Julius Genachowski, "Unleashing America's Invisible Infrastructure," Federal Communications Commission (Oct. 21, 2010), at <http://reboot.fcc.gov/blog?entryId=904238>.

²² See *Public Interest CMRS Competition Comments* at 23-24.

²³ *Id.* at 21-23.

²⁴ *Id.*

²⁵ See Comments of Free Press and Media Access Project, WT Docket No. 10-133 (filed July 30, 2010), at 13-14 (quoting an analyst comment on the wireless market as "not quite a duopoly yet" but "with the vast majority of growth going to two companies, it's close").

²⁶ This report departed from its predecessors in failing to find effective competition in the combined market for wireless voice, data, and text services. *Fourteenth Report*. Moreover, the report analyzed a combined market, and the mobile broadband market is likely more concentrated.

²⁷ *Id.* at ¶ 51.

²⁸ *Id.* at 9.

²⁹ *Id.* at 9-10.

³⁰ *Id.* at 13 (reporting margins for AT&T ranging between 35.8% and 38.5% over the past 3 years and margins for Verizon between 43.6% and 47.5% over the same time period, where no other provider has reported a margin higher than 33.1% in the same period).

The duopolist incumbents do not wish to facilitate any additional competitors and will in some instances act to prevent others. For example, recent articles suggest that even after the exclusive AT&T/Apple deal ends and the iPhone becomes available to Verizon, Verizon will attempt to pay Apple for a “semi-exclusive” deal wherein the iPhone could only be offered through AT&T and Verizon, and not through Sprint, T-Mobile, or any regional carrier.³¹ As the Commission considers moving forward in its pending proceeding on data roaming, a policy change that could potentially facilitate greater competition in the mobile broadband market, a broad coalition of wireless industry supporters have joined public interest and technology advocates in demonstrating their support for data roaming. Indeed, the coalition includes all major U.S. mobile carriers except for AT&T and Verizon.³²

Taken together, the history of bad behavior by major incumbents; clear data indicating their dominance in the market; and industry and policy features that empower them to retain that dominance belie any argument that a variations in service provider choice could justify any differential treatment in establishing pro-consumer, pro-innovation policies.

Contrary to some arguments, the supposedly nascent state of the mobile broadband market does not justify any creative interpretations of this history and data, because the mobile broadband market is not nascent. According to the Commission’s own data, the mobile wireless market is already nearly the same size as the fixed market. As of December 31, 2009, Commission data collected through Form 477 indicates approximately 52.5 million mobile data connections, and approximately 80.6 million fixed connections, with speeds of at least 200 kbps.³³ This market is not new, either. The Commission’s first report on the state of wireless competition, in 1995, noted that “data communications are increasing rapidly” in the context of private mobile radio services (PMRS).³⁴ Three years later, the Commission’s third report included an entire section on “mobile wireless data services,” a category that explicitly included Internet access over mobile connections, even subdividing carriers between those focusing on handsets and those providing wireless modems.³⁵ Data in the third report referenced six companies offering wireless data modems and service plans for them. In the fourth report in 1999, the Commission identified what it called a “smart” phone, the QUALCOMM pdQ, which included both application capabilities

³¹ Marguerite Reardon, *Verizon may pay Apple for iPhone semi-exclusive*, CNET, Dec. 6, 2010, http://news.cnet.com/8301-30686_3-20024767-266.html.

³² See Maisie Ramsey, *Carrier Group Pushes Sen. Rockefeller on Data Roaming*, WIRELESS WEEK, Dec. 3, 2010, <http://www.wirelessweek.com/News/2010/12/Carrier-Group-Pushes-Sen--Rockefeller-on-Data-Roaming/>

³³ *Internet Access Services: Status as of December 31, 2009*, Federal Communications Commission (December 2010), at p. 23, Table 7.

³⁴ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, First Report, 10 FCC Rcd. 8844, at ¶ 55 (1995) (First Report).

³⁵ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Third Report, 13 FCC Rcd. 19746, at 55-63 (1998) (Third Report).

and Internet access.³⁶ The same report noted that the Internet had 70 million American users, and that wireless carriers were trying to “capture a portion of the revenues by sales of telecommunications services used to access the Internet, e-mail, and corporate intranets through mobile wireless data services.”³⁷

The fact that exempting mobile wireless networks from the full no-blocking and non-discrimination rules will result in these connections no longer being considered as qualifying connections for the purpose of Form 477 reporting further illustrates the arbitrary and capricious nature of Chairman Genachowski’s proposed policy.

In 2008, the Commission made major revisions to how it collected subscribership information on mobile data services, responding to criticisms that by counting heavily restricted feature phones, the then-current Form 477 methodology vastly overstated the level of mobile wireless Internet use. Consumer commenters in that proceeding were very concerned that the Commission was counting mobile service subscriptions that violated one or more of the four principles of the Commission’s *Internet Policy Statement*.³⁸ Because the *Policy Statement* was adopted to guide FCC activities encouraging broadband deployment and adoption, and because Form 477 was the Commission’s chief tool in making Section 706 determinations, the consumer commenters argued that only those connections that actually adhered to the *Policy Statement* should be included in the Form 477 census.

The Commission agreed with these concerns and altered the reporting methodology to exclude these crippled connections. In the *2008 Form 477 Order*, the Commission directed mobile wireless providers to only list subscribers to data plans that enabled users to access the full, unrestricted Internet:

We therefore revise Form 477 to add a second reporting category in **which mobile service providers will report the number of subscribers whose device and subscription permit them to access the lawful Internet content of their choice.**³⁹

In the Form 477 proceeding, the recognized the importance of unfettered access to the full

³⁶ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Fourth Report, 14 FCC Rcd. 10145, at 53 (1999) (Fourth Report).

³⁷ *Id.*

³⁸ See Reply Comments of Consumers Union, Consumer Federation of America and Free Press in *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, July 16, 2007.

³⁹ *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, Report and Order and Further Notice of Proposed Rulemaking, FCC 08-89 (rel. June 12, 2008) (*2008 Form 477 Order*) (emphasis added).

Internet as a baseline feature to even be considered for the purposes of the semi-annual census of U.S. high-speed *Internet* connections. And by differentiating between the device and the subscription, the Commission also recognized that crippling the underlying transmission services was had the same effect on a consumer's ability to access the Internet as using a technologically limited device.

Therefore, if the Order adopted tracks current news reports, when mobile data providers take advantage of the Commission's explicit authorization to block and degrade Internet content, we will see this entire category drop out of the Form 477 subscriber tallies. By not allowing end users to "access the lawful Internet content of their choice," the providers of these services will offer something other than "Internet access service," and thus will have no place in a tally of those services.

This aberrant outcome should concern the Commission for two reasons. First, it will cause substantial difficulties in conducting accurate data analyses in the broadband space. Second, it clearly highlights the arbitrary and capricious nature of subjecting the wireless medium to an entirely different open Internet policy framework. It's clear that the wireless networks of 2011 will be more robust and capable than the wireless networks of 2007. In the 2007 *Form 477 Order*, the Commission's rightly chose to adopt a policy of technological neutrality despite the underlying differences in network architecture between wired and wireless networks. The current draft *Open Internet Order* retreats from these principles of equal treatment based on political considerations, not on new information or changed circumstances. Such a path is neither sustainable nor sound.

The Commission has found that un- and underserved communities are more likely to use mobile wireless services as their primary Internet connection. Treating wireless connections differently under the Network Neutrality policy would result in inequitable access to the full open Internet.

Independent research reflects that disproportionate shares of lower-income youth and minorities tend to access the Internet solely through mobile devices,⁴⁰ and the Commission has recognized that 90 percent of housing units unserved by broadband access could be reached most cheaply by extending 4G wireless services to those areas.⁴¹ Yet with the current draft *Open Internet Order*, the Commission would explicitly authorize the operators that serve these sometimes under- and unserved communities to provide a crippled, discriminatory Internet experience.

⁴⁰ See John Horrigan, Pew Internet & American Life Project, *Wireless Internet Use* 18 (2009), available at <http://pewinternet.org/~media/Files/Reports/2009/Wireless-Internet-Use-With-Topline.pdf>; John Horrigan, Pew Internet & American Life Project, *Home Broadband Adoption 2009* 32 (2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf>.

⁴¹ Federal Communications Commission, *The Broadband Availability Gap* 13 (Omnibus Broadband Initiative, OBI Technical Paper No. 1, 2010), available at <http://download.broadband.gov/plan/the-broadband-availability-gap-obi-technical-paper-no-1.pdf>.

The Commission must not adopt rules that create open networks for only those Americans who can afford them and relegate low-income, minority, and rural Americans to an Internet without free speech protections and cutting-edge applications. This approach runs counter to the Communication Act's directive for the Commission to "make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."⁴²

The Commission has a long-stated policy to close the digital divide, one that received much needed attention with the National Broadband Plan. It would be irresponsible for the Commission to contribute to the widening of the digital divide with this policy.

The Commission's differential policy makes no sense in light of the way consumers actually use their access devices.

Long gone are the days when Internet users were chained to a fixed desktop computer that could only be used with one network connection. Laptop use is widespread, and many users have abandoned the desktop computer entirely.⁴³ Many of these laptops can readily switch from an Ethernet cable to a WiFi network to a 3G wireless connection.⁴⁴ Many popular phones have both WiFi antennas and cellular radios and can run nearly all the same applications and access the same content as laptops.⁴⁵ Netbooks and tablet computers blur the lines further — such devices are often sold with mobile wireless plans, and they serve some of the functions of a computer while offering the mobility associated with smaller and lighter devices.⁴⁶ From the Internet user's vantage point, there are no longer static categories of fixed and mobile devices; many devices transcend those categories. The Commission can and should foster the innovation and interconnectedness that the seamless transitions between fixed and mobile networks that these emerging devices allow. Adopting rules that afford the same protections to users of both types of connections is the best way to accomplish that goal.⁴⁷

⁴² 47 U.S.C. § 151.

⁴³ See Charles Arthur, *How Laptops Took Over the World*, THE GUARDIAN, Oct. 28, 2009, <http://www.guardian.co.uk/technology/2009/oct/28/laptops-sales-desktop-computers>.

⁴⁴ *Laptop Buying Guide: What Do I Need to Stay Connected on my Laptop*, CNET REVIEWS, http://reviews.cnet.com/2719-7602_7-273-5.html (last visited Oct. 9, 2010).

⁴⁵ See, e.g., iPhone 4 Technical Specifications, <http://www.apple.com/iphone/specs.html> (last visited Oct. 9, 2010).

⁴⁶ See, e.g., Brian Nadel, *3G Netbooks: Are They the Cell Phones of the Future?*, COMPUTERWORLD, Feb. 25, 2009, http://www.computerworld.com/s/article/9128175/3G_netbooks_Are_they_the_cell_phones_of_the_future_; iPad – iPad WiFi + 3G, http://store.apple.com/us/browse/home/shop_ipad/family/ipad?aid=AIC-WWW-NAUS-K2-BUYNOW-IPAD-INDEX&cp=BUYNOW-IPAD-INDEX#data-plan-faqs (last visited Oct. 9, 2010).

⁴⁷ For example, adopting differential rules for wireless networks could stifle innovation and user choice in a very tangible ways. An iPhone user might be able to access one category of content

Conclusion: A coherent broadband policy framework must be technologically-neutral. The open Internet policy should account for network engineering differences solely through reasonable network management exceptions.

There is just one Internet, accessed by a variety of methods, under a variety of conditions. Until the Commission says otherwise, Internet users assume they are all taking different paths to the same Internet. If the Commission fails to equally apply rules to wireless and wired services, it will make a radical change in policy that will forever alter the Internet.

The open Internet rules proposed by the Commission last fall strike the right balance between the rigid and the flexible when it comes to the theoretical limitations of mobile wireless access networks. The October 2009 proposal sent the right signals to all market players and would ensure that the Internet, regardless of the access medium, remains a general-purpose platform that promotes unprecedented innovation and democratic participation. The current draft Order sends the opposite signal, that what was heretofore an open two-way communications platform free of all forms of discrimination may now be turned into a closed platform where network operators can control the pace and direction of innovation. This abandonment of technological neutrality and the establishment of a two-tiered Internet is arbitrary, capricious, and just plain poor stewardship of the public interest. We urge the Commission to return to a policy of equal applicability of open Internet protections to wired and wireless networks and grant wireless operators the flexibility they need to legitimately manage their networks, not block, degrade and interfere based on economic concerns.

Sincerely,

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in his home via his WiFi network, only to lose his ability to connect to the same content while waiting at a bus stop on the sidewalk outside his house. For the user, his interest in the content is unaffected by his location and the platform over which he obtains access to the Internet. The content creator's interest in reaching the user is likely similarly undiminished by the user's switch to the mobile network; if anything, significant content is targeted specifically at the mobile user. It makes no sense for the Commission to adopt a disparate set of rules for mobile and fixed networks when users and content creators should perceive and do perceive mobile and fixed networks as effectively interconnected.