

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

In the Matter of )  
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A National Broadband Plan for Our Future ) GN Docket No. 09-51  
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**REPLY COMMENTS OF AT&T INC.**

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## INTRODUCTION AND SUMMARY

The American Recovery and Reinvestment Act of 2009 directs the Commission to draft a National Broadband Plan to “ensure that all people of the United States have access to broadband capability” and that such capability can be “maxim[ally] utiliz[ed]” to achieve the Act’s public-interest goals.<sup>1</sup> As almost all commenters agree, this translates into a Plan with two concrete goals: **(1) ensuring 100 percent broadband availability** and **(2) enabling 100 percent broadband adoption**. If, as AT&T urges, the Plan incorporates both goals and is successfully executed by 2014, it will leave a magnificent legacy for this Administration: a revolution not just in how this country communicates, but in how it learns, does business, serves its most vulnerable, and manages its resources, all for the greater public good.

There is also substantial consensus in the record that, to meet these ambitious goals, the Plan should focus on a few key initiatives, discussed below, that are the most likely to deliver the greatest gains. These initiatives, moreover, are fully consistent with the “common sense” principles for sound policymaking that Chairman Genachowski described at his confirmation hearing: They will leverage the “power of pragmatism,” avoid “the danger of dogma,” and encourage “private enterprise, the indispensable engine of economic growth.”<sup>2</sup>

- ***Policies That Encourage Facilities-Investment in Unserved and Underserved Areas.*** Private initiative has made great progress in deploying terrestrial broadband services to more than 90 percent of American households over the past decade. Nonetheless, some parts of this country where deployment may be uneconomic or only marginally economic remain unserved or significantly underserved. The Plan must commit the government as a whole to policies that will attract the additional private-sector investment needed to fill these broadband gaps.

To that end, the Plan should endorse private-public partnerships and targeted government support programs to ensure universal service in those specific areas of the country where market incentives alone may be insufficient to facilitate deployment. And the Plan should call for greater utilization of broadband in the government’s own programs and services. Broadband use by government anchor tenants can help spur the deployment of facilities into underserved areas, and those facilities can then be expanded to serve residential and business customers in the vicinity.

In addition, the Plan should reaffirm the Commission’s pragmatic approach to broadband oversight, under which the Commission focuses on the *ex post* enforcement of its Internet openness principles rather than on the *ex ante* imposition of preemptive regulations that are at best irrelevant and at worst hostile to broadband investment. That approach has maintained a

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<sup>1</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, div. B, tit. VI, § 6001(k)(2) (Feb. 17, 2009) (“Recovery Act”).

<sup>2</sup> Statement of Julius Genachowski, Nominee to Serve as Chairman of the Federal Communications Commission, U.S. Senate Comm. on Commerce, Science, and Transportation, at 3 (June 16, 2009), *available at* [http://commerce.senate.gov/public/\\_files/GenachowskiOpeningStatement.pdf](http://commerce.senate.gov/public/_files/GenachowskiOpeningStatement.pdf).

robust, competitive, and open Internet ecosystem that is highly responsive to individual consumer needs. There is no reason to change it.

- ***Policies to Enhance Demand for Broadband.*** Supply-side initiatives are only half the story. Although some form of terrestrial broadband is widely available in the United States, broadband *adoption* hovers closer to 60 percent. And although adoption rates accelerated over the past year, the “demand gap” remains unacceptably wide. To close it, the government and the private sector must work together on a range of initiatives.

In particular, the Plan should promote common-sense, pragmatic policies whose efficacy can be readily evaluated. For example, the Plan should endorse the use of stimulus funding to support pilot programs that subsidize broadband service and computer equipment for low-income Americans or provide digital-literacy education and training. These pilot initiatives could be modeled on the existing efforts of organizations like One Economy and others that already have begun to address the demand gap for broadband services. The Plan also should seek to engage public institutions like universities, community centers, and libraries, which can offer broadband services to unserved and underserved communities and help familiarize them with its benefits. Adoption efforts also should include pilot programs that employ broadband in health care, e-government, energy-management initiatives, education, and other contexts that can help make broadband more relevant to more members of our society.

The Plan should also endorse private initiatives to empower consumers with more and clearer information about the services they purchase and how to use them, and about how their personal information is shared. If all stakeholders in the Internet ecosystem commit to basic principles of transparency on these issues, consumers will be more secure and in control online—and will be more likely to participate in the Internet’s global ecosystem.

The Plan should also encourage government and private stakeholders to educate end users about *online safety* risks and the available protections. And it should encourage those stakeholders to work in a cooperative, coordinated manner in pursuit of solutions to protect broadband networks and services against *cybersecurity* threats.<sup>3</sup>

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<sup>3</sup> Stark evidence of the need for aggressive action on cybersecurity was presented just a few weeks ago, when elaborately prepared and executed attacks were launched against numerous government and private-sector websites in the United States and South Korea that involved “tens of thousands of computers around the globe [that] were infected with rogue software . . . that told them to repeatedly attempt to access the targeted sites, a tactic aimed at driving up traffic beyond the sites’ normal capacity and denying access to legitimate users.” See Blaine Harden et al., Washington Post, *U.S., South Korea Targeted in Swarm of Internet Attacks* (July 9, 2009), available at [http://www.washingtonpost.com/wp-dyn/content/article/2009/07/08/AR2009070800066\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2009/07/08/AR2009070800066_pf.html). Among other websites, the attacks reportedly targeted the departments of Homeland Security and Defense, the Federal Aviation Administration and the Federal Trade Commission, as well as the NASDAQ, the New York Stock Exchange, and the Washington Post. *Id.*

- ***Engaging All Stakeholders.*** The country can achieve the goals of the National Broadband Plan only through the combined efforts of many private-sector and government stakeholders, because the Plan’s objectives transcend what the Commission can accomplish on its own.

First, agencies throughout the federal government must align their policies to support the Plan’s objectives. For example, the Departments of Education, Energy, Labor, Transportation, and Health and Human Services can play a key role by including a greater broadband focus in their programs; the Department of Homeland Security and the Federal Trade Commission should help the industry pursue solutions to security and privacy issues and educate our citizens about those solutions; and all government agencies should seek opportunities to include broadband in their procurement efforts.

States and local governments should likewise work with the communities and institutions within their borders and facilitate infrastructure deployment by ensuring that their own laws and regulations are aligned with the Recovery Act’s objectives. For example, state and local governments can focus on easing access to their rights of way and reforming their tax policies.

Above all, the private sector must be fully engaged. Filling the nation’s broadband gaps will require many billions of dollars in continued private investment to deploy broadband networks and services to those who lack them today. Private initiative will also generate the “killer applications” needed to make broadband ever more attractive to consumers. And private stakeholders must work together collaboratively to address privacy concerns, Internet congestion, intellectual property disputes, and security threats.

- ***Reject Backwards-Looking Proposals to Impose Heavy-Handed Regulation on Broadband Services.*** A handful of commenters seek to reopen long-settled regulatory controversies by calling for the re-regulation of markets that Congress directed the Commission in 1996 to keep unregulated, all without any showing of “demonstrable public interest harms”<sup>4</sup> that would justify new, prescriptive regulations. But these backward-looking proposals would do nothing to promote, and much to thwart, the overriding objectives of the National Broadband Plan. As the Commission’s recent experience with the local telephone service market demonstrates, those proposals would merely encourage synthetic, intramodal competition using the facilities that today’s broadband providers *have already built*, while doing nothing to advance the Recovery Act’s goals of deploying *new broadband facilities to unserved and underserved areas*. Indeed, such an approach would affirmatively deter private companies from making risky multi-billion-dollar capital investments by saddling them with burdensome and unpredictable regulations whenever they do so.

As Commissioner Cops has explained, “Our challenge is to make sure a *focused, practical, achievable* broadband plan comes out—instead of trying to resolve every contentious issue

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<sup>4</sup> Federal Communications Commission, FCC Commission Meeting, *The FCC and Broadband: The Next 230 Days*, at 8 (July 2, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291879A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291879A1.pdf).

that has fueled so many years of seemingly-endless debates over telecommunications.”<sup>5</sup> The Plan should therefore focus on the monumental task ahead—achieving 100 percent broadband deployment and enabling 100 percent broadband adoption. Policymakers should keep their eyes on the ball and not become mired in side-show regulatory controversies.

\* \* \*

This is a watershed moment in America—an opportunity to bring all Americans on-board the twenty-first century Internet. The Plan should be a blueprint for the entire government. It should focus on building out broadband infrastructure to the places that need it most, on educating consumers about the benefits and challenges of the on-line experience, and on helping first-time users exploit the Internet to better their lives. Every policy included in the Plan should be evaluated through that lens, and every proposal that fails to serve those goals should be discarded. AT&T looks forward to working with the Commission and the rest of the government and the industry in this ambitious effort.

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<sup>5</sup> Remarks by Michael J. Copps, Commissioner, Federal Communications Commission, Pike & Fischer’s Broadband Policy Summit V, Washington, DC, at 2 (June 18, 2009), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291492A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291492A1.pdf) (emphasis added).

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## DISCUSSION

AT&T Inc., on behalf of itself and its affiliates (collectively, “AT&T”), respectfully submits these reply comments in response to the Commission’s April 8, 2009 Notice of Inquiry on the formulation of the National Broadband Plan<sup>6</sup> mandated by the American Recovery and Reinvestment Act of 2009 (“Recovery Act”).<sup>7</sup>

**I. THE RECORD REFLECTS BROAD CONSENSUS THAT THE NATIONAL BROADBAND PLAN SHOULD PURSUE AGGRESSIVE BROADBAND ACCESS AND ADOPTION GOALS THROUGH INCLUSIVE, FORWARD-LOOKING, AND CONSUMER-FOCUSED MEASURES**

**A. Most Commenters Agree That the Plan Should Focus on the Twin Goals of Encouraging Deployment of Broadband Facilities and Addressing Impediments to Broadband Demand**

As AT&T has stressed, the National Broadband Plan should be designed to achieve two fundamental goals: *ensuring 100 percent broadband availability and enabling 100 percent broadband adoption by 2014*. These objectives are the core building blocks for the participatory, inclusive, broadband-powered future envisioned in the Recovery Act: a future in which “all people of the United States” have *access* to broadband capability and *utilize* it to enhance consumer welfare, employment opportunities, civic participation, public safety, health care, energy, and other critical objectives.<sup>8</sup> Those twin goals—one focused on supply and one on demand—should guide each of the Plan’s policy choices. As Commissioner Copps recently explained, the Plan must “turn[] our new national commitment [to broadband] into a workable

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<sup>6</sup> Notice of Inquiry, *A National Broadband Plan for Our Future*, GN Docket No. 09-51, FCC No. 09-31 (rel. Apr. 8, 2009) (“*Notice*”).

<sup>7</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, div. B, tit. VI, § 6001(k)(2) (Feb. 17, 2009) (“*Recovery Act*”).

<sup>8</sup> *Id.*

national strategy”—a task that calls for practical, integrated solutions across the government and the private sector.<sup>9</sup>

The work ahead does not begin from scratch. As the GAO recently noted, the private sector already has made terrestrial broadband service available to well over 90 percent of America’s households—after beginning with a base of near *zero* percent just over a decade ago.<sup>10</sup> The incumbent wireline carriers and the cable industry alone have spent far more than a hundred billion dollars on broadband network infrastructure.<sup>11</sup> At the same time, the Commission’s competition data show that the number of broadband providers in all categories has increased steadily every year, with providers of newer technologies (Wi-Fi, WiMAX, and BPL) increasing nearly three-fold between 2004 and 2007.<sup>12</sup> And though, as discussed below, broadband adoption lags behind broadband availability, the percentage of broadband users

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<sup>9</sup> Remarks by Michael J. Copps, Commissioner, Federal Communications Commission, Pike & Fischer’s Broadband Policy Summit V, Washington, DC, at 3 (June 18, 2009), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291492A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291492A1.pdf) (“*Copps Remarks*”).

<sup>10</sup> See Government Accountability Office, *Telecommunications: Broadband Deployment Plan Should Include Performance Goals and Measures to Guide Federal Investment*, GAO 09-494, at 11 (May 2009), *available at* <http://www.gao.gov/new.items/d09494.pdf> (“*GAO Report*”); see also AT&T Comments at iv-v, 9; Time Warner Cable Comments at 4-5, 7-11; Comcast Comments at 32-45; NCTA Comments at 9-14; TPI Comments at 1-2; Verizon Comments at 12-24; CTIA Comments at 2.

<sup>11</sup> See, e.g., Fifth Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 23 FCC Rcd 9615, 9651 ¶ 74 (2008) (noting that the industry plans \$50 billion in capital expenditures in 2008 and 2009); AT&T, Press Release, *AT&T to Invest More Than \$17 Billion in 2009 to Drive Economic Growth* (Mar. 10, 2009), *available at* <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26597>; NCTA, *Industry Data*, *available at* <http://www.ncta.com/Stats/BroadbandAvailableHomes.aspx> (showing almost 120 million homes with access to cable broadband service, and industry capital investments of \$146.8 billion since 1996).

<sup>12</sup> Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of December 31, 2007*, at tbl. 7 (Jan. 2009), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-287962A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287962A1.pdf) (“*FCC High-Speed Services Report*”).

continues to grow at an accelerating pace. Recent data from the Pew Internet & American Life Project reveal that over the last year, in the midst of one of the worst economic downturns this country has faced, broadband adoption rates increased significantly—improving broadband’s status as one of the most quickly adopted consumer technologies ever introduced.<sup>13</sup> That trend both reflects and fuels parallel growth in online content and applications, which have grown exponentially in both numbers and significance over the past several years.

In short, much of the groundwork for a broadband-powered nation is already underway. As the record shows here, the Plan must focus on bringing broadband to the remaining parts of the country that do not have it today—and on creating a collaborative partnership between the private sector and the government to make that happen.

***Ensuring 100 Percent Availability.*** Although a few commenters treat this proceeding as a pretext for promoting their own parochial regulatory agendas, the opening comments as a whole reveal a remarkably broad consensus in favor of focusing the Plan on measures that will foster universal broadband availability.<sup>14</sup> In other words, there is a strong consensus that the nation must commit to policies that will deliver universal *broadband* service—just as once the nation committed to, and largely achieved, universal *voice* service. And while, as noted, the industry’s investment in broadband infrastructure has made terrestrial broadband service available to well over 90 percent of America’s households,<sup>15</sup> some communities remain

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<sup>13</sup> John B. Horrigan, Pew Internet & American Life Project, *Home Broadband Adoption 2009*, at 3-5 (June 2009), available at <http://www.pewinternet.org/~media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf> (“*Pew 2009 Report*”); Comcast Comments at 77.

<sup>14</sup> See, e.g., Cisco Comments at 15 (“[T]he Plan should propose a framework under which *all* aspects of federal policy—and certainly all aspects within the Commission’s jurisdiction—are evaluated on the basis of the impact they might have on the deployment and use of next-generation communications technologies.”); AT&T Comments at 3.

<sup>15</sup> See, e.g., *GAO Report* at 11; see also note 10, *supra*.

unserved. Commenters may diverge on the details of how to bring those communities online, but most agree that the task will require massive investments in new broadband infrastructure—and that the Plan must therefore focus on how to promote those investments.

For example, the Consumer Federation of America and Consumers Union note that “[a]chieving maximum coverage of an affordable broadband network as soon as possible should be the goal . . . . We need to get people connected for the broadband communications that opens the door to economic engagement and civic participation.” Consumers Union Comments at 11. Both the Ad Hoc Telecommunications Users Committee and the Communications Workers of America voice a similar overarching goal, and Google likewise agrees that the Plan should “foster greater broadband deployment.”<sup>16</sup> Motorola advocates a Plan that “promotes broadband deployment,” and Cox recommends that the Plan aim to swiftly cut the number of unserved homes in half, by “ensuring that all Americans, even those living in remote locations, have access to at least one broadband option.”<sup>17</sup>

Intel likewise advocates “fostering mobile as well as wireline broadband to every American” using “facilities-based competition,” a proposal seconded by Cisco, which expressly advocates a Plan that demands “nothing short of 100% broadband availability.”<sup>18</sup> The Telecommunications Industry Association urges “the Commission [to] continue its efforts to remove barriers to, and provide incentives for, facilities-based entry into the broadband market,” while Verizon and Verizon Wireless (“Verizon”) agree that the plan must “have as a top priority

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<sup>16</sup> Google Comments at 5. *See* AdHoc Comments at 2-6; Communications Workers of America Comments at 2; Google Comments at 35-42.

<sup>17</sup> Motorola Comments at 11; Cox Comments at 3-4.

<sup>18</sup> Intel Comments at 6, 2; Cisco Comments at 3, 4, 13.

filling those gaps” that remain in broadband deployment.<sup>19</sup> The Independent Telephone & Telecommunications Alliance advocates that the Plan “strive to provide consumer households in all regions of the Nation, including those in rural and high cost areas, with access to quality services.”<sup>20</sup> Qwest stresses that the Plan’s objective must be ubiquitous broadband build-out, and Time Warner, Comcast, and NCTA similarly agree that “[o]ne essential objective of the national broadband plan must be the expansion of broadband infrastructure to currently unserved areas.”<sup>21</sup>

***Enabling 100 Percent Adoption.*** Most commenters further recognize that the Plan will miss the mark if it focuses *only* on the “supply-side” goal of ensuring 100 percent availability of broadband facilities. As AT&T and many other commenters explain, there is a stark gap between the *availability* of broadband infrastructure, which now reaches over 90 percent of U.S. households, and the *adoption* of broadband, which hovers at around 60 percent.<sup>22</sup> And notwithstanding the dramatic broadband adoption increase reported in the most recent Pew study, this demand gap remains a serious problem, especially for America’s most vulnerable populations.<sup>23</sup>

Commenters from across the industry thus stress the need for specific policies in the United States to promote the Recovery Act’s “maximal utilization” goal. And as many note, the

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<sup>19</sup> Telecommunications Industry Association Comments at 5; Verizon Comments at 2. *See also* USTelecom Comments at 7-8 (urging the Commission to pursue the ambitious goal of ubiquitous access in five years).

<sup>20</sup> ITTA Comments at 7. *See also* Embarq Comments at 3-4, 6 (arguing that the Plan should aim for the widest possible deployment of broadband, focusing on areas that are currently unserved).

<sup>21</sup> Time Warner Cable Comments at 18. *See* Qwest Comments at 3; Comcast Comments at 46-47; NCTA Comments at 30.

<sup>22</sup> AT&T Comments at 5. *See also, e.g.,* Comcast Comments at 17; *GAO Report* at 17.

<sup>23</sup> *Pew 2009 Report* at 3-5.

Plan need not approach this challenge with a blank slate. In several countries with robust broadband adoption figures—South Korea, Sweden, and Japan, for example—policymakers have adopted aggressive measures designed to stimulate demand, such as digital-literacy training programs, promotion of e-government, and subsidies for broadband equipment and services—as discussed further below.<sup>24</sup>

Policymakers here must do the same, pairing supply-side initiatives with a broad commitment to demand-side programs. As Time Warner Cable points out, “merely deploying broadband infrastructure is not enough”; instead, “[a]ddressing the gap” between availability and adoption “should be among the Commission’s highest priorities.” Time Warner Cable Comments at 20-21. Cisco writes that the Plan “must account for the need to stimulate demand for broadband services,” and it proposes several steps that the Plan should recommend toward that end. Cisco Comments at 24, 26-28; *see also* Telecommunications Industry Association Comments at 6-8. Communications Workers of America identifies “barriers to broadband adoption, including the cost of computers, broadband access, lack of digital skills, and recognition of the value of broadband by some segments of the population” as among the chief broadband issues the Plan must address through concrete remedial measures. Communications Workers of America Comments at 3, 18-19. Comcast similarly advocates a Plan designed to “address[] barriers to adoption.” Comcast Comments at 5; *see also* NCTA Comments at 37-38. Cox suggests that the Plan must enhance the “usefulness of broadband” so as “to increase broadband penetration for the most disengaged consumers[.]” Cox Comments at 8. Cricket likewise argues that the Plan should include a panoply of demand-side initiatives. Cricket Communications Comments at 4-10. Verizon agrees that “a central focus of policymakers must

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<sup>24</sup> *See GAO Report* at 19-21; Telecommunications Industry Association Comments at 32-35; *see also* Section V.A, *infra*.

be on the various issues that keep far too many Americans offline, even after broadband is available to them,” and urges that the Plan include “approaches that improve consumer literacy, encourage computer ownership, and develop American’s recognition of the relevance of broadband in their lives.” Verizon Comments at 31.

There is also general consensus in favor of certain steps that the Plan should include in order to promote adoption, such as support for lower-income consumers when they purchase broadband services or equipment, training and education, a broader commitment to e-government, and more useful and relevant government content and applications online. See Part II, *infra*. As other countries’ experience demonstrates, these *demand-side* policies are at least as important as the supply-side issues that are more familiar territory to the Commission. Indeed Intel argues that, by funding programs that encourage *adoption* of broadband services, the United States “could achieve a world-leading broadband outcome.” Intel Comments at 9.

**B. The Plan Can Effectively Achieve Its Aims Only If It Engages Stakeholders Across the Government and Private Sector**

Achieving 100 percent broadband availability and enabling 100 percent broadband adoption will require expansive solutions that reach well beyond the Commission’s own agenda. The Commission itself can take a number of unilateral steps to promote these goals, such as maintaining a stable regulatory environment and keeping its policies aligned with pro-investment incentives.<sup>25</sup> But as Cisco notes, “the Plan cannot be limited to the traditional tools of communications policy.” Cisco Comments at 7. Instead, the National Broadband Plan requires a far more expansive approach that involves coordination with the private sector and a host of other government players at the federal, state, and local levels. See, e.g., AT&T Comments at

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<sup>25</sup> See Microsoft Comments at 2, 10; Cisco Comments at 7; CTIA Comments at 3; Telecommunications Industry Association Comments at 21.

10-12. In Comcast's words, "the Commission should take a holistic approach, one that recognizes that it will take a collaborative effort on the part of Congress, the Administration, the Commission and other federal agencies, and state and local governments, all working hand-in-hand with the private sector, to achieve ubiquitous broadband . . . and widespread adoption." Comcast Comments at 6.

To begin with, the Plan must involve close coordination *at least* among the federal agencies tasked with broadband deployment and adoption responsibilities in the Recovery Act: the FCC, NTIA and RUS. Microsoft, for example, argues that the Plan requires "institutional, programmatic coordination across the FCC, NTIA, and RUS" to ensure that their programs are "mutually reinforcing."<sup>26</sup> But more than this is needed. As a number of commenters agree, the nation's broadband deployment goals also require the commitment of Congress and state and local governments to adopt broadband tax incentives, policies facilitating access to rights-of-way and expediting zoning and tower-siting decisions, and laws supporting the interstate provision of telemedicine, enhanced cybersecurity, and other initiatives.<sup>27</sup>

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<sup>26</sup> Microsoft Comments at 8. *See also* Verizon Comments at 125-26; Cricket Communications Comments at 6; Qwest Comments at 5.

<sup>27</sup> *See, e.g.*, Cisco Comments at 7 ("[S]uccess of the American broadband industry will depend on appropriately structured taxation and trade policies and will therefore require attention by Congress and other actors."); *id.* at 15 (the Plan requires Congressional support for liberalized trade policy for communications technology and elimination of tax and accounting requirements for information technology products); Verizon Comments at 127-28 (tax policies); Motorola Comments at 12; U.S. Chamber of Commerce Comments at 6; Windstream Comments at 18-22. The states themselves stress the significant role they must play in increasing adoption and targeting support to areas in need of particular attention. For example, Massachusetts, Michigan, and New York all note states' intimate knowledge of local conditions, their ability to coordinate with local institutions on the ground, and their ability to link broadband expansion and economic development. *See* Massachusetts Broadband Institute Comments at 2-3; Michigan Dep't of Info. Technology Comments at 1; New York PSC Comments at 25 (a "'national' plan . . . will need input of the states to address the varied needs across the nation, many of which the states have already addressed in the absence of a national broadband plan").

Multiple government players must likewise work together to stimulate broadband *demand*. As the Communications Workers of America note, the Plan should promote interagency “programs that support education, workforce development, health care, energy and the environment, affordable housing, public safety and homeland security.” Communications Workers of America Comments at 19. Cisco similarly adds that “[a] successful broadband plan must contemplate actions by the myriad government actors with jurisdiction over these areas, including the Departments of Energy, Education, Health and Human Services, and Transportation, to name just a few.”<sup>28</sup> Microsoft stresses the need for “[d]emand generation programs and e-literacy programs” coordinated across the Department of Labor, the Department of Education, and other institutions. Microsoft Comments at 8. Some commenters further note the need for involvement by the FTC and the Department of Homeland Security in the privacy and online-security efforts needed to promote demand. *See, e.g.*, Comcast Comments at 25-26; ITTA Comments at 24. And as Verizon and others explain, *all* government agencies at all levels can help create demand incentives by offering online content and services that address the public’s needs. Verizon Comments at 34-35; AT&T Comments at 60-61.

Finally, of course, private initiative will be critical to achievement of the Plan’s goals. The Recovery Act devotes a relatively modest \$7.2 billion to the promotion of broadband investment, and, as many commenters observe, the limited size of that fund underscores the

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<sup>28</sup> Cisco Comments at 7. *See also* ITTA Comments at 23 (“[O]ther agencies, including but not limited to those related to health and human services, education, and social services, might obtain a stake in the effort. . . . [C]oordination among agencies . . . would benefit the overall goals of the National Broadband Plan.”); Motorola Comments at 32, 41-42 (federal grants and coordination among federal, state, and local governments can promote public-safety use of broadband, and HHS and DOD involvement can promote secure use of broadband in health services); NENA Comments at 13 (many federal agency programs can support use of broadband in emergency communications systems); Time Warner Cable Comments at 2; Cox Comments at 9-10.

importance of private capital investment.<sup>29</sup> That is as it should be: The government could not, acting alone, hope to match the hundreds of billions of dollars that the private sector has spent, nor could it manage the monumental deployment and management tasks associated with providing broadband across the United States. Accordingly, commenters across the board stress the need for policies that will encourage private investment, and they further advocate private-public partnerships to encourage demand aggregation, education and training initiatives, and various programs aimed at providing computer equipment and support to vulnerable populations.<sup>30</sup> Non-profits and public-interest groups must also play a role in engaging and educating their constituents. And all players in the online marketplace must be involved in addressing consumers' privacy concerns, developing the content and applications needed to attract new broadband users, and creating the smart network tools needed for the optimal performance of those next-generation applications.<sup>31</sup>

In short, this proceeding is not “business as usual” for the Commission. In holding the pen for the nation’s broadband plan, the Commission has both the opportunity and the obligation to look beyond the confines of its own jurisdiction and plot a course for the country as a whole to follow. The Plan must set forth policies that engage all stakeholders in a collective effort geared toward achieving the Recovery Act’s two overarching broadband objectives: ensuring 100 percent availability and enabling 100 percent adoption by 2014.

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<sup>29</sup> See, e.g., Comcast Comments at 21; NCTA Comments at 4; Motorola Comments at 11-12; Windstream Comments at 3; Time Warner Cable Comments at 22; AT&T Comments at 2, 10.

<sup>30</sup> See, e.g., Comcast Comments at 90-91; NAACP Comments at 1-2; Cox Comments at 6, 9; U.S. Chamber of Commerce Comments at 5, 7; Verizon Comments at 32; AT&T Comments at 10; Telecommunications Industry Association Comments at 28-30.

<sup>31</sup> See, e.g., Cox Comments at 11; U.S. Chamber of Commerce Comments at 9. See generally Section III.B, *infra* (addressing need for smarter networks).

**C. This Is Not the Occasion to Consider the Parochial Wish-Lists Submitted by Some Commenters**

Some commenters seem unconcerned with the unprecedented breadth of the Commission’s mandate to draft a government-wide, forward-looking broadband-enhancement plan that keeps America moving in the right direction with maximal consensus and minimal delay-producing controversy. These commenters instead view this proceeding as a collection of narrow Commission rulemakings on familiar topics, most of which were resolved many years ago. For example, the separate comments of CompTel, Sprint, Cbeyond, and XO all rehash those parties’ tired advocacy for re-regulation of traditional, non-rural special access services, as if their own financial interests in that topic should be the centerpiece of the nation’s foundational broadband plan.<sup>32</sup> The comments of Free Press, Public Knowledge, the New America Foundation, and the Media Access Project likewise seek to reopen all of the Commission’s Internet legal and policy decisions of the past dozen years, with an eye to regulating broadband and Internet access services across the board—as though the Commission could somehow encourage providers to risk additional billions of dollars in infrastructure investment by saddling them with burdensome, commoditizing regulation whenever they do.<sup>33</sup>

As explained in Section III.C below, those hyper-regulatory proposals are not only untenable on the merits, but radically out of step with the Recovery Act, and for two separate reasons. *First*, the premise underlying the hyper-regulatory proposals—that the broadband build-out of the past dozen years has been a “failure”—is based on a gross distortion of the historical record and collapses under the slightest scrutiny. As the GAO recently reported, the

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<sup>32</sup> See generally Comptel Comments; Sprint/Nextel Comments; XO Comments.

<sup>33</sup> See, e.g., Communications Workers of America Comments at 1; Free Press Comments at 3. In Public Knowledge’s words, “Every aspect of U.S. telecommunications policy needs to be re-examined and revised” to “correct the failures of our recent broadband policy.” Public Knowledge Comments at 1-2.

Commission’s longstanding rejection of *ex ante* broadband regulation has coincided with extensive broadband deployment in the United States and the full flowering of the Internet ecosystem—as described above and in even further detail in AT&T’s opening comments.<sup>34</sup> The recent Pew results confirm that adoption rates accelerated rapidly over the past year, even in the face of a recession—and precisely among the more vulnerable, underserved populations that need broadband the most.<sup>35</sup> And “[h]owever one accounts for broadband penetration over the last 13 years, it is clear that the pace of adoption is among the fastest of any communications technology introduced in the United States over the last 150 years.” Comcast Comments at 77.

In other words, there is no alarming broadband “crisis”—there is simply more to be done. And despite its rhetoric, even Free Press acknowledges the meteoric increase in broadband adoption over the past decade. Free Press Comments at 130, 225-26; *see also* Public Knowledge Comments at 1. Again, more work is necessary: Broadband must reach even the most remote corners of our country; serve the needs of all Americans; and be deployed to address our most pressing societal needs. But Free Press and the other commenters that urge a backward-looking approach for the Plan offer no solutions to address those challenges; they just offer polemics.

*Second*, the hyper-regulatory proposals of Free Press and others would thwart the very objectives these commenters profess to support. For example, Free Press champions legacy Commission policies that promoted *non-facilities-based*, intramodal competition—an approach that would do much to harm, and nothing to help, the cause of building out *new infrastructure* to those areas of the country that now lack it. *See* Free Press Comments at 265-68; *see generally* Section III.C.2.b, *infra*. Of course, these commenters do not—because they cannot—explain how heavy-handed regulation could possibly incentivize the private capital investment needed to

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<sup>34</sup> GAO Report at 11. *See also* AT&T Comments at 78.

<sup>35</sup> Pew 2009 Report at 3-5.

underwrite such multi-billion-dollar deployment projects. Nor do they explain how such regulation could induce enthusiastic participation in private-public partnerships or encourage innovation in new technologies and applications.

Moreover, Free Press's call to re-open the long-settled controversies of yesterday—such as whether, as the Supreme Court has held, the Commission is correct in characterizing broadband Internet access as an integrated “information service”—misses the broader sweep of this ambitious national endeavor. As Commissioner Cops just reaffirmed, the National Broadband Plan must produce forward-looking, practical solutions, not bog down the Commission in an effort to “resolve every contentious issue that has fueled so many years of seemingly-endless debates over telecommunications—debates that have too often deflected us from progress we should have been making, too frequently deflected us from the real issues of broadband because we spent so much time parsing arcane language rather than confronting real-world challenges.”<sup>36</sup>

## **II. AMONG THE MANY MEASURES COMMENTERS SUPPORT TO PROMOTE BROADBAND ADOPTION, SEVERAL STAND OUT AS RECEIVING OVERWHELMING SUPPORT**

As discussed, closing the *demand* gap is one of the most pressing imperatives of the National Broadband Plan. In Intel's words:

[T]he demand gap is larger than—and persists longer than—the supply gap. Even when the supply gap is resolved, some portion of it will be replaced with a demand gap. Thus, a demand-side stimulus program could have a higher impact on our nation's “broadband bottom line,” and this is another area where the U.S. could achieve a world-leading broadband outcome, by placing greater emphasis on demand stimulation than other nations.

Intel Comments at 9. Indeed, because the broad range of demand issues has thus far remained outside the specific focus of any one regulator, providing unified leadership on these issues is

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<sup>36</sup> *Cops Remarks* at 3.

one of the most significant and original contributions the Plan can make. And the Plan could begin to address demand issues in immediate and concrete ways by endorsing discrete pilot programs designed to subsidize broadband services and equipment for lower-income Americans, for example, or provide digital-literacy training or other solutions. Such initiatives could be quickly launched in partnership with organizations and anchor institutions that already are on the ground today, and could form the basis for more far-reaching policies over time.

To be sure, as discussed above, recent research suggests that the demand gap is already shrinking. Broadband subscription by American adults increased substantially over the past year, from 55 percent to 63 percent. That progress occurred despite a serious recession and even encompassed those groups with the lowest adoption rates, including lower-income individuals, the elderly, those in rural areas, and minority groups.<sup>37</sup> Indeed, demand has more than tripled in just the past five years.<sup>38</sup> Nevertheless, 21 percent of adults remain non-Internet users and appear not to understand the benefits that the Internet can provide.<sup>39</sup> And many Americans, especially lower-income consumers, do not even have a computer—and all too often cannot afford broadband service *or* equipment.<sup>40</sup> In short, more remains to be done. And there is a broad consensus that the following types of initiatives will be most effective at enabling 100 percent adoption.

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<sup>37</sup> *Pew 2009 Report* at 3-5, 13-14.

<sup>38</sup> Leichtman Research Group, Inc., Press Release, *Over Two-Thirds of U.S. Households Subscribe to Broadband* (June 10, 2009), available at <http://www.leichtmanresearch.com/press/061009release.html> (“*Leichtman Report*”).

<sup>39</sup> *Pew 2009 Report* at 7-8. See also Cox Comments at 8; Telecommunications Industry Association Comments at 7-9; Communications Workers of America Comments at vi, 18; Verizon Comments at 26, 33-34.

<sup>40</sup> *Leichtman Report*. See also Cox Comments at 5; Telecommunications Industry Association Comments at 6-8, 10; Communications Workers of America Comments at vi, 18.

### **A. The Plan Should Address Income-Based Barriers to Adoption**

The vast majority of commenters recognize that the Plan cannot succeed unless policymakers tackle the adoption barriers faced by lower-income Americans. As NASUCA explains, “Income or poverty, rather than geography, appear to be the strongest factors in explaining lagging broadband subscription.” NASUCA Comments at 8. Indeed, Free Press sees the income-based digital divide as “the most difficult issue plaguing our country’s broadband markets.” Free Press Comments at 20. Commenters across the spectrum agree.<sup>41</sup>

Yet lower-income individuals may have the most to gain from the resources broadband can offer. Among other things, broadband facilitates access to educational resources that can make all the difference to a child’s learning and performance; higher-learning or job-training resources that can help a family lift itself out of poverty; online job opportunities; a trove of health-related and nutritional information; and government information and support services that, in the absence of broadband, would require beneficiaries to travel and wait in line, often during working hours. In other words, enabling lower-income Americans to incorporate the use of broadband resources into their daily lives—whether at home or at a local community institution—is a prerequisite to achieving the Recovery Act’s goals.

Commenters are equally united in their view that two key initiatives could significantly boost broadband subscribership among lower-income Americans: funding programs that provide low-cost or free computers and other broadband-enabled devices to lower-income households, and using the Commission’s universal service programs to support monthly broadband service charges and installation fees. Thus, commenters support the notion of private-public partnership

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<sup>41</sup> See, e.g., Communications Workers of America Comments at 11; Cisco Comments at 25; Comcast Comments at 79; Cox Comments at 5; Intel Comments at 11; NCTA Comments at 18; Consumers Union Comments at 11; USTelecom Comments at 11; Windstream Comments at 23.

programs such as Connected Nation’s “No Child Left Offline” program and similar initiatives by One Economy, which have put thousands of computers in the hands of underprivileged families; others support government-funded “voucher” programs to allow families to purchase equipment of their own choosing.<sup>42</sup> And an overwhelming number of commenters suggest that the Commission reform the Lifeline and Link-Up programs to help families get and maintain the broadband services they need.<sup>43</sup> As the Telecommunications Industry Association explains, “The decision to open low-income support for broadband service can play a key role in stimulating demand, remediating the factors cited by Pew and others as most significant in a consumer’s decision not to adopt broadband service.” Telecommunications Industry Association Comments at 10. Even a modest subsidy program would, as Free Press asserts, “make a substantial difference in the lives of the more than 2 million households that would be supported.” Free Press Comments at 243.

## **B. The Plan Should Endorse E-Literacy Education and Training Programs**

Relatedly, the record shows widespread support for a commitment in the Plan to advance computer education and training programs. As AT&T showed in its opening comments, lack of education is another key impediment to broadband adoption—one that is often correlated with

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<sup>42</sup> See, e.g., Comcast Comments at 94-94; NCTA Comments at 37; Intel Comments at 11; AT&T Comments at 50-51; Verizon Comments at 32-33; Telecommunications Industry Association Comments at 6-10; Cox Comments at 6; Communications Workers of America Comments at vi, 18.

<sup>43</sup> See, e.g., Windstream Comments at 24; NASUCA Comments at 31; Cisco Comments at 28; Comcast Comments at 94-95; Consumers Federation Comments at 1; Communications Workers of America Comments at vi, 18; ITTA Comments at 23; Time Warner Cable Comments at 20-21; Public Knowledge Comments at 2, 6; Telecommunications Industry Association Comments at 6, 9-10; Free Press Comments at 237-43; New Jersey Rate Counsel Comments at 23-24; Cricket Communications Comments at 7. As discussed below, many commenters also suggest that for some Americans, even subsidies may not be a sufficient means of ensuring home broadband access, at least not initially. For such Americans, community-based anchor institution programs may be a more realistic way to ensure that they can access, understand, and make use of broadband services. See Section II.C, *infra*.

lower incomes. AT&T Comments at 43-47. Although the level of broadband adoption is increasing for Americans whose highest level of education is a high-school degree—from 40 percent in 2008 to 52 percent in 2009—the subscription rate for this group still lags significantly behind that for the adult population generally. *See id.* at 43; *Pew 2009 Report* at 14. This may sometimes reflect a lack of familiarity with the benefits of broadband, since many Americans with lower education levels work in jobs that do not involve broadband use and live in lower-income communities where broadband may not be widely used or even available. These Americans, as well as the elderly and others, may relatedly lack the training needed to use the Internet or the skills needed to arrange for broadband services.<sup>44</sup>

Commenters are therefore united in the view that the Plan should encourage policymakers to work with the private sector to offer and support broadband education and training programs.<sup>45</sup> These programs should be designed to introduce those unfamiliar with the broadband Internet to the valuable benefits it brings. As many commenters agree, such education should begin in elementary schools across the country, thereby leveling the playing field for children from different places and backgrounds.<sup>46</sup> Broadband education and training programs are also needed in other public institutions that serve vulnerable populations and can direct them to relevant content and services and teach them the Internet skills they need.<sup>47</sup>

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<sup>44</sup> *See* New Jersey Rate Counsel Comments at 24-25; Cox Comments at 5; Google Comments at 34-35; Communications Workers of America Comments at vi; Verizon Comments at 26, 31-32; Comcast Comments at 89-91.

<sup>45</sup> *See, e.g.,* Free Press Comments at 30, 238, 243; Cox Comments at 69; NCTA Comments at 37-38; Comcast Comments at 89-91; Google Comments at 34; Verizon Comments at 32-34.

<sup>46</sup> *See, e.g.,* Cox Comments at 3-4; Google Comments at 38; Public Knowledge Comments at 40; Verizon Comments at 31-32.

<sup>47</sup> *See* Cox Comments at 5-6 (discussing such programs); Google Comments at 34-35; Comcast Comments at 89-91; Verizon Comments at 26, 31-34; Cricket Communications Comments at 9-10.

“E-literacy” programs are most likely to succeed if stakeholders from government *and* the private sector are engaged in them and working together. The Departments of Education and Labor should continue to play a key role in supporting such programs.<sup>48</sup> Private-public partnerships can offer training programs through anchor institutions.<sup>49</sup> And state and local governments also have a key role to play in educating their constituencies about the benefits of broadband and how to use the Internet.<sup>50</sup> Finally, the Plan should focus specifically on educating those with special needs—the disabilities community, the elderly, those in very rural and sparsely populated areas—about the special services, equipment, and opportunities broadband can offer and how they can employ them in their own lives.<sup>51</sup>

### **C. The Plan Should Embrace the Role of Anchor Institutions**

The Plan can help reach those Americans who face the biggest demand impediments by engaging the public and community-based “anchor institutions” that already serve these populations.<sup>52</sup> First, deploying the broadband facilities needed to serve anchor institutions will

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<sup>48</sup> See Cox Comments at 9; Microsoft Comments at 8; Comcast Comments at 91.

<sup>49</sup> See Cox Comments at 5; Public Knowledge Comments at 48-49; Communications Workers of America Comments at vi, 15-16; Verizon Comments at 32.

<sup>50</sup> See Cox Comments at 5-6, 8; Google Comments at 34-35; Communications Workers of America Comments at 15-16.

<sup>51</sup> See Center for Accessible Technology Comments at 5, 8-10 (“[M]any citizens with disabilities have not been made fully aware of the advantages that broadband services offer them in particular, such as telemedicine, work-at-home, distance learning, videotelephony, and remote interpreting for sign language. We ask that the Commission explore consumer awareness of and exposure to such applications in detail, as a way of increasing adoption and use.”); Coalition of Organizations for Accessible Technologies Comments at 15-16; Communications Workers of America Comments at 33.

<sup>52</sup> For a detailed analysis of the benefits of promoting broadband use by anchor tenants, see Comments of AT&T Inc., *American Recovery and Reinvestment Act of 2009 Broadband Initiatives*, NTIA Docket No. 090309298–9299–01, at 1-6 (filed Apr. 13, 2009) (attached as Exhibit A to Submission of AT&T Inc., *Federal Communications Commission’s Consultative Role in the Broadband Provisions of the Recovery Act*, GN Docket No. 09-40 (filed Apr. 13, 2009)) (“*AT&T NTIA/RUS Comments*”).

help spur deployment more generally, by laying foundational infrastructure that can be extended into the surrounding areas in the same community, including residential areas.<sup>53</sup> As Microsoft explains, the broadband infrastructure that connects anchor institutions to the Internet can serve “as jumping off points for delivering last-mile service to Main Street and into neighborhoods” where those institutions are located. Microsoft Comments at 6. Second, promoting the needs of these institutions is, of course, a critical goal in its own right.<sup>54</sup> The Telecommunications Industry Association, for example, argues that the Plan should “promote continued deployment efforts” to “schools, libraries, universities, and health care providers” as well as others, Telecommunications Industry Association Comments at 30, because these institutions can then deploy broadband to advance many of the Recovery Act’s purposes, including worker training, job creation, education, advanced health care, and the like.<sup>55</sup>

Third, as various commenters explain, anchor institutions can serve as key focal points of *demand enhancement* efforts. Non-profits, schools, libraries, universities, community centers, government offices, and other community-focused institutions can offer broadband services to those who have never used them, and they can also provide continuing broadband access for free to those who might be unable or unwilling to subscribe themselves.<sup>56</sup> This exposure might help

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<sup>53</sup> See AT&T Comments at 7; Google Comments at 39; Microsoft Comments at 5-6; USTelecom Comments at 10; Public Knowledge Comments at 48.

<sup>54</sup> Recovery Act, § 6001(b)(3).

<sup>55</sup> See AT&T NTIA/RUS Comments at 1-6; Telecommunications Industry Association Comments at 30-31; Microsoft Comments at 5; Cox Comments at 3.

<sup>56</sup> See, e.g., AT&T NTIA/RUS Comments at 1-6; NAACP Comments at 1 (“We encourage the FCC to work with anchor institutions such as public schools, community centers, community based organizations and local libraries that can prove effective in teaching local residents about new technologies. The NAACP strongly believes that communities and individuals reluctant to bring broadband into their homes can benefit with education programs borne from public-private partnerships within local neighborhoods.”); Cox Comments at 5-6; Google Comments at 5, 37-39 (“While the FCC’s Plan should include a national residential benchmark for broadband

some people eventually take the leap to subscribing at home, at least if the service is affordable. Anchor institutions also can help with training and e-literacy efforts aimed at their different constituents—the elderly, the disabled, after-school youth, stay-at-home parents, and those from different cultural and language backgrounds.<sup>57</sup> And with their localized focus, these institutions can help promote the content and services that their particular communities need. *See* Public Knowledge Comments at 45. As Public Knowledge recognizes, “these institutions can serve as important allies in the effort to provide information and training in local communities” because they can “provide citizens with information regarding how best to acquire, set up and utilize a broadband Internet connection” and train them “in new media literacy, on how best to use their broadband connection for educational, economic and creative pursuits and on how to use the web to become more engaged in their communities and government.” *Id.* at 49.

**D. The Plan Should Endorse Industry Efforts to Empower Consumers to Make More Educated Choices About Broadband Services and the Use of Their Private Information**

AT&T and a substantial number of other commenters agree that all potential broadband user groups, regardless of income, geography, or connectivity needs, should receive clear, accessible information to help them understand the capabilities and limitations of their broadband service choices.<sup>58</sup> To that end, the government, through the National Broadband Plan,

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infrastructure build-out, it should also acknowledge that there are hard-to-reach populations that may be best-served by community hub centers that have high-speed connectivity and that can serve as ‘anchor’ facilities.”); Ad Hoc Comments at 6-7; New Jersey Rate Counsel Comments at 18-19; Telecommunications Industry Association Comments at 30; Public Knowledge Comments at 40, 45, 48-49; USTelecom Comments at 10.

<sup>57</sup> *See AT&T NTIA/RUS Comments* at 2, 4-6; NAACP Comments at 1; Google Comments at 38; Public Knowledge Comments at 40, 45, 48-49; USTelecom Comments at 10; Verizon Comments at 32.

<sup>58</sup> *See, e.g.,* AT&T Comments at 43-47, 56-59, 151-55; Center for Democracy & Technology Comments at 13; Center for Digital Democracy Comments at 2-3; Free Press Comments at 173, 176; Public Knowledge Comments at 15.

should encourage ongoing efforts by industry stakeholders to develop and implement best practices for consumer disclosures; should work in partnership with the industry in educating consumers about those disclosures; and, when necessary, should remedy consumer deception.

***Service capability information.*** Consumers should have meaningful information about the capabilities and limits of their broadband services. As Free Press notes, “[p]roper disclosure of network limitations . . . would go far to alleviate confusion and ambiguity in services, by providing consumers with the facts they need to make informed consumer choices among network access services.” Free Press Comments at 177.

AT&T already has taken significant steps to address these concerns. AT&T has designed its customer disclosures to reflect three core, overarching principles: (1) AT&T supports customers’ right to free expression; (2) AT&T will give customers clear information about the capabilities of the services it provides and clear notice of any meaningful limitations on those services; and (3) when AT&T provides broadband service based on speed, it will do so in discrete, non-overlapping tiers that are disclosed to customers.<sup>59</sup> As Free Press agrees, this is precisely the type of consumer-focused practice needed to create a predictable environment and an educated broadband user community. “AT&T has shown that all providers can make a greater effort to inform their consumers” as to speed and other service capabilities and

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<sup>59</sup> See Reply Comments of AT&T Inc., *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriber Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriber Data*, WC Docket No. 07-38, at 3 (filed Sept. 2, 2008) (“AT&T Form 477 Reply Comments”); Letter from James W. Cicconi, AT&T, to Kevin J. Martin, Chairman, FCC, WC Docket No. 07-52 (filed Sept. 11, 2008) (attaching AT&T’s updated Terms of Use for broadband Internet access service), available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520067446](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520067446).

limitations. Free Press Comments at 182-83.<sup>60</sup> Because Internet users must be able to trust all participants in the Internet ecosystem, the Plan should encourage *all* providers of broadband service and online applications and services to similarly inform consumers clearly about the service users can expect and the rules of the road users are expected to follow.

Although it makes abundant sense to encourage voluntary disclosure of service capabilities and limitations in consumer-friendly terms, it would make no sense to adopt the proposal of Free Press and others to force providers to disclose the technical minutiae of their network management practices.<sup>61</sup> First, the risks to consumers and service providers alike from such a requirement would be formidable. Detailed disclosure of network management tools would merely enable ill-intentioned parties to overcome network defenses and exploit identifiable vulnerabilities, all to the detriment of broadband consumers generally. The surest way to expose networks to worms, spam, and effective denial-of-service attacks is to give would-be attackers, worm-designers, and spammers notice of precisely how network engineers plan to address the threats they pose.

Second, those risks would be offset by no discernible consumer benefits. So long as consumers know the limits of their service and how to confirm that they are receiving what they contracted for, they have no need for additional technical information about exactly how network engineers configure the network in the face of ever-evolving technological challenges. Indeed, the very fluidity of those challenges, and the hour-by-hour solutions engineers devise for them, would make it not only costly but nearly impossible to keep relevant disclosures up to date—and those disclosures would be so technical as to be all but useless to the average consumer

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<sup>60</sup> See also Free Press Comments at 182 (“AT&T has demonstrated that providers can take steps to demonstrate to consumers a minimum level of service.”) (footnotes omitted).

<sup>61</sup> See, e.g., Free Press Comments at 183-85; Public Knowledge Comments at 16-17.

anyway.<sup>62</sup> In short, the Plan should support an industry-wide drive to adopt consumer disclosure practices like AT&T's, but it should avoid rules that would mandate detailed disclosures of sensitive network information.<sup>63</sup>

**Privacy.** Consumers also must have adequate notice and choice about how *all* players in the online ecosystem will collect and use their personal information. As AT&T explained in its opening comments, alleviating consumer concerns about online privacy is an important part of moving to a broadband-based, online society. AT&T Comments at 56-59.<sup>64</sup> AT&T thus agrees with the many commenters who cite the importance of clearing up “confusion among consumers about companies’ privacy policies and practices.”<sup>65</sup>

Toward that end, AT&T already has adopted a core set of principles, explained in its opening comments, to guide the company’s approach to online privacy and advertising. AT&T

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<sup>62</sup> See Comments of AT&T Inc., *Petitions of Free Press and Vuze*, WC Docket No. 07-52, at 33 (filed Feb. 13, 2008) (“*AT&T Free Press/Vuze Comments*”) (discussing fluidity of network management).

<sup>63</sup> Nor would it make any sense to require disclosure of technical details in the services offered by *broadband Internet access providers*, but not the technical details of the services offered by online *application* and *service* providers, such as the algorithms used in search engines or the protocols used in P2P applications. The latter have an equal (and often greater) effect on a user’s Internet experience. For example, far more than the network practices of any broadband provider, Google’s search algorithms—which Google views as valuable proprietary secrets—affect how easily consumers reach Internet content, how readily new e-commerce companies can reach customers, and which viewpoints gain traction. See Saul Hansell, *New York Times*, *Google Keeps Tweaking Its Search Engine* (June 3, 2007), available at <http://www.nytimes.com/2007/06/03/business/yourmoney/03google.html> (“[W]hat Google calls its ‘ranking algorithm’ . . . is a crucial part of Google’s inner sanctum, a department called ‘search quality’ that the company treats like a state secret.”). Similarly, the protocols used in certain P2P applications can significantly affect the performance of a consumer’s broadband connection as well as the other applications and services the consumer chooses to run simultaneously with the P2P application. See *AT&T Free Press/Vuze Comments* at 11-16.

<sup>64</sup> See also, e.g., Center for Democracy & Technology Comments at 12; Public Knowledge Comments at 12; Verizon Comments at 54; Comcast Comments at 26.

<sup>65</sup> See, e.g., Center for Digital Democracy Comments at 3; Center for Democracy & Technology Comments at 13; Future of Privacy Forum Comments at 7.

Comments at 58-59. And beyond this, AT&T recently launched a new, consumer-friendly, and transparent privacy policy that applies across its service offerings. Under that policy, AT&T pledges to honor straightforward, meaningful privacy commitments, including promises to keep customer data secure and never to sell personal information to anyone for any purpose.<sup>66</sup>

AT&T's privacy commitments have been lauded as "an earnest effort to lay out for people what AT&T knows about them."<sup>67</sup> Moreover, AT&T provides consumers with a clear right to opt out of certain marketing uses of their information.<sup>68</sup>

As more of our day-to-day business, health care, banking, learning, and communicating is done online, as the Recovery Act envisions, there must be a more comprehensive commitment by *all* online stakeholders to ensure that consumers know what information is being used, for what purpose, and what choices they have about it. The Plan therefore should endorse efforts by industry players to establish generally applicable principles and minimum standards—bolstered by the continuing oversight and support of the Federal Trade Commission, which has already been integrally involved in establishing basic industry guidelines.<sup>69</sup>

#### **E. The Plan Should Embrace Other Enterprise and Institutional Demand-Enhancement Initiatives**

While the demand-focused initiatives discussed above have won broad consensus, commenters note that many other means of promoting broadband also merit endorsement in the

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<sup>66</sup> AT&T Privacy Policy, <http://www.att.com/gen/privacy-policy?pid=2506>.

<sup>67</sup> Saul Hansell, New York Times Bits Blog, *A New List of How Much AT&T Knows About You* (June 11, 2009), <http://bits.blogs.nytimes.com/2009/06/11/a-new-list-of-how-much-att-knows-about-you/> (concluding that "there is in fact a directness to the policy that is often lacking").

<sup>68</sup> See AT&T Privacy Policy, *Questions about Online Activity Tracking and Advertising*, <http://www.att.com/gen/privacy-policy?pid=13692#tracking>.

<sup>69</sup> See, e.g., Future of Privacy Forum Comments at ii; Verizon Comments at 56; Comcast Comments at 26 ("These are areas in which the Federal Trade Commission has been involved for years and remains in the forefront, and there should be deference to its efforts.").

Plan. For example, many commenters highlight the need for greater use of broadband in government services, projects, and content.<sup>70</sup> Others urge the use of broadband in e-health initiatives<sup>71</sup> and in Smart Grid programs and other machine-to-machine applications.<sup>72</sup> Many commenters also discuss the need to facilitate the use of broadband by public-safety entities.<sup>73</sup> All of these initiatives will both attract end users to broadband by providing them with the content and services they need, and by making it more relevant to their day-to-day lives. Many commenters also advocate using the Plan to invigorate government efforts to address cybersecurity and online-safety concerns, which deter many consumers from making full use of broadband services.<sup>74</sup> As AT&T discussed in its opening comments, all such initiatives are important and warrant consideration as key elements of the National Broadband Plan. *See* AT&T Comments at 41-77, 143-56.

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<sup>70</sup> *See, e.g.*, Comcast Comments at 82-89; Center for Democracy & Technology Comments at 17-19 (“[G]overnment entities must pitch in by taking the necessary steps to embrace the new capabilities that the technology offers.”); Verizon Comments at 34-35.

<sup>71</sup> *See, e.g.*, Telecommunications Industry Association Comments at 31; Motorola Comments at 40-42; Cox Comments at 9; Mobile Future Comments at 9; Comcast Comments at 66-67; American Telemedicine Association Comments at 3-4, 6; U.S. Chamber of Commerce Comments at 9; Rehabilitation Engineering Research Center for Wireless Technologies Comments at 17-19.

<sup>72</sup> *See, e.g.*, Cox Comments at 10; Digital Energy Solutions Campaign Comments at 1-2; Motorola Comments at 32-35; IEEE Comments at 14-16; Southern Company Services, Inc. Comments at 4, 13-14.

<sup>73</sup> *See, e.g.*, Motorola Comments at 25-32; Cox Comments at 10; Telecommunications Industry Association Comments at 37-39; Qwest Comments at 34-36; Mobile Future Comments at 8; Rehabilitation Engineering Research Center for Wireless Technologies Comments at 19-20.

<sup>74</sup> *See, e.g.*, Qwest Comments at 34-38; USTelecom Comments at 28-39; Verizon Comments at 45-53; Comcast Comments at 25-27; Cox Comments at 3, 11-12 (“Left unchecked, fear of identity theft and fraud, questionable marketing tactics, and online sexual predators can present a significant psychological hurdle to Internet usage.”).

### III. SUPPLY-SIDE MECHANISMS TO ENSURE UBIQUITOUS BROADBAND AVAILABILITY AND ADOPTION

In the words of Commissioner Copps, the federal government and the private sector must make it a top national priority to deliver broadband to the approximately 10 percent of Americans who lack broadband access, *GAO Report* at 16, so that “[e]very person in this land” has the opportunity to be “part of Twenty-first century communications.”<sup>75</sup> This aspiration can become a reality only if policymakers adopt creative solutions to promote investment in these hard-to-serve areas that private investment has not yet reached of its own accord. Unlike many foreign nations, the United States has always relied overwhelmingly on private enterprise to build and operate its communications infrastructure, and (as discussed above in Section I.B) it should continue to do so today to reach the final phase of universal broadband coverage.<sup>76</sup>

This reliance on private enterprise has profound significance for the design of the Plan. As the Commission has recognized since the Kennard era of the late 1990s, and as Congress concluded in the Telecommunications Act of 1996, policymakers must maintain an investment-friendly, predictable regulatory environment if they hope to persuade private companies to risk billions of dollars in broadband investments in geographic areas that have not attracted investment to date. That means that all proposed forms of regulatory intervention should be evaluated to ensure that they are aligned with the goal of promoting the investment needed to

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<sup>75</sup> *Copps Remarks* at 2.

<sup>76</sup> *See* NCTA Comments at 16; Comcast Comments at 49; Time Warner Comments at ii; Verizon Comments at 77-85. As noted, Congress’s decision to devote only \$7 billion in the Recovery Act to broadband further confirms the universal expectation that private enterprise will provide the overwhelming share of capital needed to complete the broadband project. *See* NCTA Comments at 4; Comcast Comments at 4; Motorola Comments at 11-12.

make universal broadband deployment a reality—and old rules should be revisited to ensure regulatory alignment with the new broadband future.<sup>77</sup>

At a minimum, this approach will require the same pragmatic, market-based policies that helped meet the deployment milestones this country has already reached. In certain areas, however, regulators have a more active role to play. First, to bring broadband to the most remote areas of this country, policymakers must facilitate “private-public partnerships to build our essential infrastructure” and ensure that “far-seeing public policy [is] coupled with the engines of the private sector.”<sup>78</sup> Thus, as many commenters suggest, policymakers should embrace programs like Connected Nation’s private-public “demand aggregation” project and similar efforts to bring broadband to public institutions in rural areas.<sup>79</sup>

In the pages below, AT&T reviews several areas where the Broadband Plan can help establish a stable, pro-investment regulatory regime that meets these objectives. For these issues and all others, the Commission should employ a straightforward test:

- *To the extent any proposal encourages network investment and expansion, it should be considered for inclusion in the Broadband Plan;*
- *To the extent a proposal would deter investment and expansion, it should be rejected.*

**A. The Plan Should Encompass Long-Overdue Reform of Universal Service and Intercarrier Compensation**

As Commissioner Cops recently explained, “we need comprehensive, holistic reform of Universal Service. Not just because the costs to consumers of not fixing it are increasing, but

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<sup>77</sup> AT&T Comments at iii, 36-38; Cisco Comments at 15; Microsoft Comments at 2; Time Warner Comments at 23-25; NCTA Comments at 16; Verizon Comments at 7.

<sup>78</sup> *Cops Remarks* at 2.

<sup>79</sup> *See, e.g.*, AT&T Comments at 9-12, 42; Comcast Comments at 48-49 (suggesting the Commission act as a clearinghouse for information collected by Connected Nation and similar programs); Time Warner Comments at 18; Verizon Comments at 125.

because it is time to bring this program into the Twenty-first century.”<sup>80</sup> Numerous commenters agree. Like AT&T, they recognize that the time has come to overhaul the existing universal service and intercarrier compensation mechanisms and focus the industry on programs that will move the nation toward increased broadband deployment and usage.<sup>81</sup> More specifically, there is widespread support for moving the existing high-cost universal service mechanism away from an exclusive or even a primary focus on *voice* service and toward targeted support for the deployment of *broadband* services in high-cost areas.<sup>82</sup> As NECA explains, “[t]raditional voice-only telephone services, while still important, now form only a small subset of . . . customers’ overall telecommunications needs.” NECA Comments at 5. And Level 3 explains that “[t]he definitive reason for rejecting the old ways is that broadband networks offer superior economic and technological performance than the copper-based public switched network (‘PSTN’).” Level 3 Comments at 3.

Many commenters accordingly support the basic universal service proposal AT&T has outlined: the creation of two new support programs, one designed to support fixed broadband infrastructure, and the other designed to support mobile wireless broadband infrastructure.<sup>83</sup>

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<sup>80</sup> *Copps Remarks* at 5.

<sup>81</sup> *See, e.g.*, CTIA Comments at 4 (arguing that the Commission should “[n]ot allow the legacy inefficiencies and opportunities for arbitrage of a system developed for a bygone technological era to taint our broadband future—comprehensive reform should repurpose the ailing universal service and intercarrier compensation system to reflect broadband realities”); Level 3 Comments at 3 (“There is uniform recognition that the existing intercarrier compensation and universal service regimes must be reformed. The Commission must reject the temptation to layer on top of broadband services a regulatory regime that it has labeled as obsolete and targeted for reform.”); T-Mobile Comments at 23; Telecommunications Industry Association Comments at 23; NECA Comments at 2-3.

<sup>82</sup> *See, e.g.*, AT&T Comments at 86-87; NECA Comments at 2, 5; CTIA Comments at 39-49; Verizon Comments at 112.

<sup>83</sup> *See* AT&T Comments at 86-87; Comments of AT&T Inc., *Notice of Inquiry Seeking to Refresh the Record Regarding the Issues Raised by the Tenth Circuit in the Qwest II Decision*,

There is also general agreement that a project-based, competitively awarded process is the best means to distribute broadband funding, and that there should only be one recipient of a particular type of funding in a given area.<sup>84</sup> These policies would promote efficient use of scarce universal service dollars and grant all citizens access to high quality, affordable broadband services.<sup>85</sup>

Reform of the universal service *contribution* mechanism is equally critical to creating a sustainable regulatory framework that can support broadband deployment. The contribution factor for telecommunications providers has increased dramatically over the last decade, and it reached 12.9 percent this month<sup>86</sup>—up from 8.9 percent in the third quarter of 2004 and 2.9 percent in the third quarter of 1999.<sup>87</sup> As many commenters recognize, policymakers must intervene now to keep this trend from imperiling the very foundations of America’s universal

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WC Docket No. 05-337, CC Docket No. 96-45, at 5, 18-24 (filed May 8, 2009) (“*AT&T Tenth Circuit NOI Comments*”); Comments of AT&T Inc., *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, at 3-5, 8-25, 40-41 (filed Apr. 17, 2008). *See, e.g.*, Telecommunications Industry Association Comments at 23; Verizon Comments at 8, 115; NECA Comments at 2-3; Motorola Comments at 20; Qwest Comments at 11-14; New Jersey Rate Counsel Comments at 31-32; Texas Statewide Telephone Cooperative Comments at 9-11; USTelecom Comments at 16-18; Rural Cellular Association Comments at 2, 21-22; CTIA Comments at 39-49; T-Mobile Comments at 25.

<sup>84</sup> *See, e.g.*, New Jersey Rate Counsel Comments at 32; AT&T Comments at 87; Free State Foundation Comments at 9-10; Ad Hoc Comments at 9-10; Comcast Comments at 67; Qwest Comments at 12.

<sup>85</sup> As discussed above, most commenters also agree with AT&T that the Lifeline and Link-Up programs should provide funding for the installation and purchase of broadband services by Americans with low incomes. *See* Section II.A, *supra*.

<sup>86</sup> “Proposed Third Quarter 2009 Universal Service Contribution Factor,” Public Notice, DA 09-1322, at 1, 3 (rel. June 12, 2009), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-09-1322A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-1322A1.pdf).

<sup>87</sup> “Proposed Third Quarter 1999 Universal Service Contribution Factor,” Public Notice, DA 99-1091, at 4 (rel. June 4, 1999), *available at* [http://www.fcc.gov/Bureaus/Common\\_Carrier/Public\\_Notices/1999/da991091.txt](http://www.fcc.gov/Bureaus/Common_Carrier/Public_Notices/1999/da991091.txt); “Proposed Third Quarter 2004 Universal Service Contribution Factor,” Public Notice, DA 04-1613, at 1, 3 (rel. June 7, 2004), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-04-1613A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-04-1613A1.pdf).

service system.<sup>88</sup> And even apart from its unsustainability, the existing contribution model—based on the retrograde, pre-broadband concept of “interstate telecommunications revenues”—is profoundly inequitable in the burdens it places on different providers.<sup>89</sup> A strong consensus thus supports the replacement of that model with a stable, technologically neutral, and more easily enforced mechanism that would base contribution obligations on numbers, or numbers and connections.<sup>90</sup>

Finally, as many commenters recognize, intercarrier compensation reform must go hand-in-hand with universal service reform.<sup>91</sup> Many local exchange carriers rely heavily on access revenues to fund the construction and operation of their network infrastructures. Recent reductions in those revenues—the result of steady declines in both access lines and access

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<sup>88</sup> See, e.g., Verizon Comments at 112; Massachusetts Department of Telecommunications and Cable Comments at 16-18; see also *Copps Remarks* at 5 (lamenting that the contribution factor is at “an all time high”).

<sup>89</sup> See, e.g., CTIA Comments at 48-49; T-Mobile Comments at 26; Verizon Comments at 112-13.

<sup>90</sup> See, e.g., AT&T Petition for Immediate Commission Action to Reform Its Universal Service Contribution Methodology, *Universal Service Contribution Methodology*, WC Docket No. 06-122 (filed July 10, 2009); AT&T Comments at 87-88; Letter from Mary L. Henze, AT&T, to Marlene Dortch, FCC, WC Docket No. 06-122, CC Docket Nos. 96-45 and 01-92 (filed Nov. 21, 2008); Letter from Mary L. Henze, AT&T, and Kathleen Grillo, Verizon, to Marlene Dortch, FCC, WC Docket No. 06-122, CC Docket No. 96-45 (filed Oct. 20, 2008); Reply Comments of AT&T Inc., *High-Cost Universal Service Support*, WC Docket No. 05-337, at 30-39 (filed Dec. 22, 2008); *AT&T Tenth Circuit NOI Comments* at 13-14; CTIA Comments at 47; Communications Workers of America Comments at 17 (“Every provider should be assessed a USF fee based on phone numbers, connections, and capacity. This approach would eliminate arbitrary regulatory exemptions from contribution obligations, protect the fiscal stability of the fund, and ensure fully equitable and competitively neutral contribution obligations.”). While AT&T and others prefer a numbers-only approach, all share the essential commitment to revising the present approach. See Verizon Comments at 113; T-Mobile Comments at 26; NCTA Comments at 34.

<sup>91</sup> See, e.g., NECA Comments at 2-3, 21; CTIA Comments at 4, 45-47; T-Mobile Comments at 23-24.

minutes<sup>92</sup>—have made it difficult for many carriers to maintain their existing voice facilities, let alone deploy state-of-the-art facilities to support broadband services.<sup>93</sup> The instability of this arrangement is further exacerbated by the methodological arbitrariness of the existing scheme—for example, unjustifiable (and thus arbitrage-inviting) variances in compensation level depending on the type of call or service provider at issue.<sup>94</sup> Unless and until the Commission puts the telecommunications industry on a path to a rational, unified rate structure, the dysfunctionality of the existing intercarrier compensation regime will continue to frustrate broadband deployment.

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<sup>92</sup> See AT&T Comments at 84-86; Comments of AT&T Inc., *High-Cost Universal Service Support*, WC Docket No. 05-337, at 2-3, 21-22 (filed Nov. 26, 2008) (“*AT&T IC/USF Comments*”). NECA publishes yearly reports on the status of access lines and revenues throughout the country. NECA’s annual tariff filing includes information on access line trends for NECA carriers throughout the country. The association’s most recent filing on June 16, 2009, projects an access line decline of 6.9 percent for 2009, on top of a 5.3 percent decline in 2008 and a 4.9 percent decline in 2007. Even worse, NECA projects an access minute decline of 9.5 percent for 2009, on top of an 8.7 percent decline in 2008 and an 8.1 percent decline in 2007. National Exchange Carrier Association, Inc., *Access Service Tariff F.C.C. No. 5, Access Service*, at 34-35 (June 16, 2009), available at [http://svartifoss2.fcc.gov/cgi-bin/ws.exe/prod/ccb/etfs/bin/binary\\_out.pl?111751](http://svartifoss2.fcc.gov/cgi-bin/ws.exe/prod/ccb/etfs/bin/binary_out.pl?111751).

<sup>93</sup> See, e.g., *AT&T IC/USF Comments* at 2; NECA Comments at 18 (“[E]xisting regulatory mechanisms supporting multi-use networks that provide today’s broadband services in rural areas are deteriorating rapidly, as users migrate from traditional ‘POTS’ and long-distance services to wireless and broadband applications, impairing the ability of rural carriers to upgrade their networks with broadband-capable plant. . . . Deterioration of existing cost recovery mechanisms threatens not only to impede further expansion of broadband, but may actually cause *reductions* in these existing deployment levels.”); CTIA Comments at 4, 45-47.

<sup>94</sup> See, e.g., NECA Comments at 18 n.38 (“Continued deterioration of cost recovery mechanisms, whether due [to] ‘access avoidance’ schemes, phantom traffic problems, artificial caps on support, or regulatory arbitrage, will inevitably have a negative impact on existing broadband services in high-cost rural areas.”); *AT&T IC/USF Comments* at 2 (“The Commission must act now to overhaul its intercarrier compensation rules in order to ensure adequate funding of service in rural areas and to eliminate the arbitrage and competitive disparities that increasingly undermine the current system.”).

**B. The Plan Should Reaffirm the Pragmatic Regulatory Policies That Have Produced Today’s Vibrant Internet and That Will Promote Tomorrow’s Innovation and Investment**

Congress has repeatedly underscored the Commission’s duty to rely first on market forces to promote the Internet’s evolution and the deployment of advanced services to all Americans, including those in underserved communities. In the preamble to the 1996 Act, Congress explained that the Act’s overarching purpose is “[t]o promote competition and *reduce regulation* in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.”<sup>95</sup> Congress emphasized the same deregulatory message in Section 230(b)(2), also added in 1996, declaring that “the policy of the United States [is] to preserve the vibrant and competitive *free market* that presently exists for the Internet and other interactive computer services, *unfettered by Federal or State regulation.*”<sup>96</sup> And in Section 706 of the 1996 Act, Congress further directed the Commission to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability” by adopting a policy of “*regulatory forbearance*” and other measures to “*remove barriers to infrastructure investment.*”<sup>97</sup>

Both Democratic and Republican administrations have remained faithful to that Congressional directive. They have uniformly recognized that regulations designed for legacy networks and services are not only unnecessary and ill-suited for broadband services and networks but could dampen the investment incentives that are critical to the evolution of the

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<sup>95</sup> Preamble to the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (emphasis added).

<sup>96</sup> 47 U.S.C. § 230(b)(2) (emphasis added).

<sup>97</sup> 47 U.S.C. § 1302(a) (emphasis added).

Internet and the deployment of advanced broadband infrastructure.<sup>98</sup> And as the GAO recently observed, this pragmatic regulatory approach coincided with enormous growth in broadband networks and online services—proving the prescience of the Commission’s and Congress’s judgment.<sup>99</sup> As discussed, in just the past decade, the broadband industry has spent hundreds of billions of dollars of private capital to expand wireline and wireless broadband networks.<sup>100</sup> New providers and entirely new platforms have emerged and continue to develop.<sup>101</sup> Access providers offer ever-improving service in a wide variety of packages, plus tailored and managed services,<sup>102</sup> while countless startups have leveraged innovative online applications and services into hugely successful enterprises. And the Internet has evolved into a platform over which consumers can find an almost unlimited array of options for learning, entertainment, communication, work, shopping, and basic communication.

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<sup>98</sup> See *infra* at pages 41-42 and 50-53 (discussing Commission actions under Chairman Kennard to reduce the burden of special-access regulation and avoid heavy-handed open-access requirements); see also, e.g., Report to Congress, *Federal-State Joint Board on Universal Service*, 13 FCC Rcd 11501, 11508 ¶ 13 (1998) (recognizing that the 1996 Act explicitly endorsed a policy of deregulation); Declaratory Ruling, *Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities*, 17 FCC Rcd 4798, 4823 ¶ 38 (2002) (finding no basis in the Act for heightened regulatory obligations for certain types of broadband access providers); Report and Order, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, 14855-56 ¶¶ 1-3 (2005) (establishing “a minimal regulatory environment for wireline broadband Internet access services to benefit American consumers and promote innovative and efficient communications”), *aff’d Time Warner Telecom v. FCC*, 507 F.3d 205 (3d Cir. 2007); Declaratory Ruling, *Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, 22 FCC Rcd 5901, 5902 ¶ 2 (2007) (establishing “a minimal regulatory environment for wireless broadband Internet access service that promotes our goal of ubiquitous availability of broadband to all Americans”).

<sup>99</sup> GAO Report at 11.

<sup>100</sup> See Section I.A, *supra*; AT&T Comments at 78-80.

<sup>101</sup> FCC High-Speed Services Report at tbl. 7.

<sup>102</sup> See Ed Gubbins, *Telephony Online, Broadband Speed Creep* (June 22, 2009), [http://telephonyonline.com/residential\\_services/commentary/att-verizon-broadband-speeds-0622/?cid=hcom](http://telephonyonline.com/residential_services/commentary/att-verizon-broadband-speeds-0622/?cid=hcom) (“*Broadband Speed Creep*”) (discussing improved speed and services offered by broadband providers).

The Plan should reaffirm the government’s commitment to this forward-looking, market-based, minimally intrusive regulatory philosophy—a point echoed throughout the record.<sup>103</sup> Specifically, the Commission should preserve the open Internet by enforcing the four principles of the *Internet Policy Statement*<sup>104</sup> on a case-by-case basis but reject calls to adopt prescriptive rules of general applicability. Doing so will enable the Commission to avoid deterring the development of “smarter” networks that can provide increasingly advanced services in a cost-efficient manner despite escalating bandwidth demands and capacity constraints. And in all events, the Plan should encourage innovation by scientists and network operators to develop more scalable methods and protocols for handling the exponential growth of Internet traffic.

There is ample reason for the Commission to reaffirm its confidence in the *Internet Policy Statement* as an appropriate and sufficient tool to ensure continued openness in the Internet ecosystem. In the four years since adopting the *Statement*’s consumer-focused principles, the Commission has found it necessary to enforce those principles only *twice*: first, to redress Madison River’s blocking of VoIP services, and more recently to address Comcast’s

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<sup>103</sup> See, e.g., Cisco Comments at 16 (“[T]he Commission has wisely protected high-speed broadband networks from extensive federal and state regulation, even while standing ready to correct market abuses when they occur.”); Motorola Comments at 13 (“As a result of the Commission’s ‘light touch’ regulatory policies, broadband has flourished.”); Qwest Comments at 2 (“Where service is currently available . . . the Commission should continue its historic regulatory ‘light touch’ approach to broadband.”); Comcast Comments at 22-23 (“The Commission should avoid using the Plan as a vehicle for proposing extensive new regulations on providers of broadband Internet service. . . . As the President recently told an audience at Georgetown University, . . . “Governments should practice the same principles as doctors: first do no harm.”); CTIA Comments at 36; USTelecom Comments at 11 (“As noted above, the existing light-touch regulatory approach to broadband networks and services has resulted in the deployment of multiple networks to the vast majority of the American population.”); Verizon Comments at 87 (“In short, the existing flexible, pro-growth approach has worked at maintaining openness and addressing any concerns that arise, but without intrusive regulation that would limit the choices available to consumers or deter investment in broadband networks.”); NCTA Comments at 8-16.

<sup>104</sup> See Policy Statement, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14986 (2005) (“*Internet Policy Statement*”).

interference with certain peer-to-peer applications used by its customers.<sup>105</sup> This case-by-case, post-hoc enforcement of the *Policy Statement* thus fully protects the consumer interest in an open Internet while leaving providers free to innovate, “unfettered by Federal or State regulation.”<sup>106</sup> As the Commission itself explained in the *Comcast Order*, a case-by-case approach is needed to accommodate the “new and dynamic” nature of the Internet, coupled with its “complex and variegated technology.”<sup>107</sup> And as Google acknowledges, the evolving Internet marketplace is “adapting to openness as a key broadband dimension that consumers find attractive.” Google Comments at 26. Even Google thus endorses a flexible enforcement model, rather than a codified regulatory regime, in order to “promote a flourishing marketplace without intrusive regulation.” *Id.* at 29.

A wide variety of technology companies embrace the same conclusion. As Cisco explains, “the more intensely regulated the communications sector is, the more risk will be assigned by capital markets wary of the potential of disruptive regulatory decisions.” Cisco Comments at 14. Cisco thus advocates reaffirming—and neither expanding nor codifying—the *Internet Policy Statement* because, as it observes, the inherent “flexibility” of the existing case-by-case approach “has produced a wealth of services and applications that might not have arisen under a strict nondiscrimination regime.” *Id.* at 18. Microsoft likewise observes that, “given the extraordinarily rapid and wholly unpredictable evolution of services and applications, we see the

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<sup>105</sup> See Memorandum and Order, *Formal Complaint of Free Press and Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications*, 23 FCC Rcd 13028 (2008), *petns. for review filed sub nom. Comcast v. FCC*, No. 08-1291 (D.C. Cir. filed Sept. 4, 2008) (“*Comcast Order*”); Order, *Madison River Commc’ns, LLC*, 20 FCC Rcd 4295 (2005). The Commission’s *Madison River* decision pre-dates the *Internet Policy Statement* by several months, but was premised on the same fundamental principles found in that statement.

<sup>106</sup> 47 U.S.C. § 230(b)(2); see AT&T Comments at 98-99.

<sup>107</sup> *Comcast Order*, 22 FCC Rcd at 13046 ¶ 31.

need for policymaking principles centered on supporting innovation and protecting consumer interests in an agile, rather than prescriptive, way.” Microsoft Comments at 10-11. And Intel adds: “The Policy Statement, coupled with existing consumer protection and business practices laws, make additional layers of Commission regulation at best unnecessary, and at worst a threat to the successful evolution of the broadband Internet marketplace.” Intel Comments at 8.<sup>108</sup>

Case-by-case enforcement of the existing *Internet Policy Statement* is not only the right approach to fostering openness while promoting innovation, it also will foster Congress’s goal of maximum utilization of broadband networks and services because it will facilitate private investment in “smarter” networks—*i.e.*, those that make the most efficient use of limited network capacity to provide consumers the services they want at the lowest cost. *See, e.g.*, Telecommunications Industry Association Comments at 6; USTelecom Comments at 7. Such networks serve the Recovery Act’s goals by offering the “most effective and efficient mechanisms” to increase broadband availability and adoption.<sup>109</sup> Indeed, smarter networks are needed to ensure that broadband platforms can effectively support multiple services at the same time, including the types of high-quality, real-time services that will advance the Recovery Act’s goals such as telemedicine services in rural areas, real-time online education; sophisticated public safety applications; or advanced telecommuting applications that make it possible to avoid travel costs and preserve energy and resources. Such services would not function properly in a

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<sup>108</sup> *See also* Time Warner Comments at 28-29 (“Absent market failure, the adoption of additional regulatory mandates in this context would threaten to harm consumers by thwarting the continued deployment of broadband networks.”); Embarq Comments at 9 (existing approach “avoids stifling innovation and letting rules become obsolete”); Verizon Comments at 86-87 (“In short, the existing flexible, pro-growth approach [under the Commission’s Broadband Policy Statement] has worked at maintaining openness and addressing any concerns that arise, but without intrusive regulation that would limit the choices available to consumers or deter investment in broadband networks.”).

<sup>109</sup> *See* Recovery Act, § 6001(k)(2)(A).

network characterized entirely by “dumb pipes.”<sup>110</sup> For example, Cisco has developed a “TelePresence” service that “creates an experience that is almost lifelike through the use of multiple high quality cameras, directional audio, and displays at twice the resolution of HDTV.” Cisco Comments at 17. But the provision of that service over the publicly accessible Internet will be impossible unless broadband providers remain free to use sophisticated “network management tools.” *Id.* Smarter networks are also safer networks. As Verizon notes, “encouraging continued innovation by broadband providers—such as smarter broadband networks—and a diversity of approaches, will strengthen our defenses against online threats and attacks.” Verizon Comments at 46.

In sum, the Plan should endorse continued investment in smart network technologies. Conversely, the Plan should reject any regulatory proposals that would hamstring network engineers as they develop such technologies.<sup>111</sup> Indeed, such proposals are not only misguided as a policy matter, but flatly inconsistent with Congress’s statutory mandate for a regulatory environment that facilitates “*high-quality* voice, data, graphics, and video telecommunications using *any technology*,”<sup>112</sup> and the “provision of new technologies or services to the public.”<sup>113</sup>

In all events, the Plan should recognize the need of network operators, the technical community, and other stakeholders to improve the scalability of broadband networks. As AT&T has explained, the exponential growth of video-oriented and other high-bandwidth Internet traffic

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<sup>110</sup> See AT&T Comments at 106-07; Verizon Comments at 6; USTelecom Comments at 2.

<sup>111</sup> See AT&T Free Press/Vuze Comments at 21-46.

<sup>112</sup> 47 U.S.C. § 1302(d)(1) (emphasis added).

<sup>113</sup> 47 U.S.C. § 157.

threatens to overwhelm existing networks.<sup>114</sup> The record in this proceeding only underscores these concerns.<sup>115</sup> Last month, Cisco released its forecast that global IP traffic will *quintuple by 2013*, with a compound annual growth rate of 40 percent.<sup>116</sup> Even excluding private network traffic, this means that, by 2013, “the equivalent of 10 billion DVDs will cross the Internet each month.” *Id.* The Plan should endorse no regulatory proposal that would tie the hands of network engineers as they try to handle rapidly growing bandwidth demands in ways that optimally balance the sometimes-conflicting interests of all network users.<sup>117</sup>

For example, a growing number of Internet technologists perceive a pressing need to improve some of the Internet’s core management protocols to permit broadband networks to meet increasing bandwidth demands. Network engineer Richard Bennett warns that the basic Internet protocols, created in the ARPANet days and still in use, cannot effectively scale to meet demand, and that “[t]he architecture of the Internet actually includes a number of built-in limits to growth.” Richard Bennett Comments at 2. In the long term, Bennett believes that the industry and scientific community will need to develop revised standards and protocols to manage the flood of new traffic in cost-efficient ways. Policymakers should accommodate such collaborative, forward-looking technological solutions as the need for them arises, rather than

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<sup>114</sup> See *AT&T Free Press/Vuze Comments* at 6-11; Comments of AT&T Inc., *Broadband Industry Practices*, WC Docket No. 07-52, at 21-44 (filed June 15, 2007) (“*AT&T Net Neutrality Comments*”).

<sup>115</sup> See, e.g., CTIA Comments at 3 (discussing the growth in “demand that is rapidly outstripping the capacity available on wireless broadband networks”); Telecommunications Industry Association Comments at 11 (“In recent years, consumer demand for bandwidth-intensive applications such as VoIP, audio and video streaming, and peer-to-peer (‘P2P’) file-sharing has revolutionized Internet usage patterns.”).

<sup>116</sup> Cisco Systems, Inc., *Cisco Visual Networking Index: Forecast and Methodology, 2008–2013*, at 1 (June 9, 2009), available at [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360.pdf](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360.pdf).

<sup>117</sup> See *AT&T Free Press/Vuze Comments* at 11-18.

binding the Internet rigidly to a technological model developed many decades ago. *See* AT&T Comments at 125-27.

**C. The Plan Should Reject Anti-Investment Proposals for Increased Regulation**

To achieve the Recovery Act’s supply-side goals—and thereby generate investment, job creation, and economic growth—the Plan should consider additional regulation only to address real, “demonstrable public interest harms.”<sup>118</sup> Accordingly, the Plan should reject proposals to re-fight yesterday’s regulatory battles and revive monopoly-era rules in the new age of convergence, competition, and technological upheaval. Those battles were properly resolved against the advocates of heavy regulation in an unbroken string of Commission and court decisions stretching back to the Clinton Administration, all with broad bipartisan support. Reversing those decisions now would make no sense because today’s competitive broadband market bears no resemblance to the single-wire market for which the monopoly-era rules were designed. And reimposing those rules would thwart the central objectives of this proceeding because they would discourage the enormous investments needed to achieve universal broadband availability and adoption.

**1. The Plan Should Reject Proposals to Reverse 15 Years of Competition-Based Pricing Flexibility in the Special Access Market**

As discussed above, a number of commenters seek government-mandated price reductions for special access services, the medium-to-high-capacity links purchased by carriers

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<sup>118</sup> Federal Communications Commission, FCC Commission Meeting, *The FCC and Broadband: The Next 230 Days*, at 8 (July 2, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291879A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291879A1.pdf) (explaining that the Commission’s “basic approach” to the Plan will be to identify “the areas where there are demonstrable public interest harms” and to propose “ways of lessening the public interest harms”).

and some end-user businesses to transport telecommunications traffic between two points.<sup>119</sup>

But these proposals for special access re-regulation are untenable for reasons that AT&T has comprehensively explained in many prior submissions.<sup>120</sup>

At the outset, it is important to distinguish between two sets of issues: issues relating to typical *special access* services (high-capacity business lines that connect office buildings or cell towers to voice and data networks) and issues relating to so-called *middle mile* services purchased by rural carriers to connect their broadband customers to the wider Internet. Only issues relating to the middle mile services are properly presented here. In contrast, issues relating to special access connections to office buildings or cell towers bear no obvious relationship to the subject matter of this proceeding: the promotion of universal broadband availability and adoption. *See, e.g.*, Sprint Comments at 18-34.

One key distinction between these two types of services relates to differences in the costs and contestability of these two types of services. Whereas there is significant competition for the provision of traditional special access services (as discussed below), there is often less competition for the provision of the middle-mile links connecting low-density rural communities to the Internet, and the low traffic volumes associated with those connections produce high costs per unit of capacity. To the extent that the rates rural carriers pay—which generally remain subject to price caps—may be higher than the rates service providers in urban areas pay—

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<sup>119</sup> *See, e.g.*, Sprint Comments at 8-34; COMPTTEL Comments at 16; Cbeyond Comments at 16-17; XO Comments at 22-28.

<sup>120</sup> *See, e.g.*, Letter from James Cicconi, AT&T, to Marlene Dortch, FCC, WC Docket No. 05-25 (June 22, 2009) (“*June 22, 2009 Cicconi Letter*”); Letter from Robert Quinn, Jr., AT&T, to Marlene Dortch, FCC, WC Docket No. 05-25 (Feb. 6, 2009); Supplemental AT&T Comments, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25 (filed Aug. 8, 2007); Supplemental AT&T Reply Comments, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25 (filed Aug. 15, 2007) (“*AT&T Supplemental Special Access Reply Comments*”).

because of the high cost of serving low-density rural communities, which renders competitive entry uneconomic—the proper policy response is to provide targeted broadband support to existing service providers to subsidize the cost of service, as AT&T has proposed in the Commission’s universal service reform docket.<sup>121</sup> Relatedly, where facilities do not exist at all or where existing facilities are inadequate due to the high cost of providing service, the proper policy response is to encourage facilities investment through targeted broadband support that will incent providers to deploy and/or augment broadband networks. But in all events, simply forcing down the regulated rates for these middle-mile connections is not the answer because it would only defeat the objective of encouraging facilities-based providers to serve high-cost rural areas in the first place.

Special access services in non-rural contexts, however, are even less appropriate targets for regulation, and for an even more fundamental reason: They are competitive and technologically dynamic already, and their prices have steadily decreased since the late 1990s, when the Commission first embraced the pricing flexibility regime that governs the marketplace today. That regime is the product of a deep bipartisan consensus spanning 20 years and several administrations. In 1989, the Commission first adopted “a policy judgment that incentive-based regulation is superior to rate of return for the regulation of certain dominant carriers, including local exchange carriers.”<sup>122</sup> In 1995, the Commission reaffirmed that judgment and further

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<sup>121</sup> See, e.g., Comments of AT&T, Inc., *Notice of Inquiry Seeking to Refresh the Record Regarding the Issues Raised by the Tenth Circuit in the Qwest II Decision; High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45 (filed May 8, 2009); Reply to Comments of AT&T, Inc., *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45 (filed June 8, 2009).

<sup>122</sup> Second Report and Order, *Policy and Rules Concerning Rates for Dominant Carriers*, 5 FCC Rcd 6786, 6789 ¶ 21 (1990) (citing Report and Order and Second Further Notice of

found that, unlike rate-of-return regulation, price cap regulation can and should “act as a transitional system as LEC regulated services,” such as special access, become “subject to greater competition.”<sup>123</sup> And in 1999, under the leadership of Chairman Kennard, the Commission adopted the *Pricing Flexibility Order*, designed to help competition “replace[] regulation as the primary means of setting prices.”<sup>124</sup> In that *Order*, the Commission made clear that “competition can be expected to carry out the purposes of the Communications Act more assuredly than regulation” ever could, and that regulation is therefore appropriate “only where and to the extent that competition remain[s] absent in the marketplace.”<sup>125</sup>

As AT&T has explained in prior submissions, the market has vindicated the Kennard Commission’s decision to rely on competition whenever possible to promote consumer welfare in the provision of special access services.<sup>126</sup> Wireline and intermodal competitors enjoy

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Proposed Rulemaking, *Policy and Rules Concerning Rates for Dominant Carriers*, 4 FCC Rcd 2873, 2931-33 ¶ 113 (1989)).

<sup>123</sup> First Report and Order, *Price Cap Performance Review for Local Exchange Carriers*, 10 FCC Rcd 8961, 8989 ¶ 64 (1995) (“*LEC Price Cap Review Order*”). Unlike rate-of-return regulation, which confines carriers to the recovery of their costs (including a reasonable cost of capital), price-cap regulation imposes a ceiling on what carriers may charge but entitles them to keep the extra margins they may obtain by cutting costs and improving efficiency. *See generally United States Tel. Ass’n v. FCC*, 188 F.3d 521 (D.C. Cir. 1999); *National Rural Telecom. Ass’n v. FCC*, 988 F.2d 174 (D.C. Cir. 1993).

<sup>124</sup> Fifth Report and Order and Further Notice of Proposed Rulemaking, *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers*, 14 FCC Rcd 14221, 14224 ¶ 2 (1999) (“*Pricing Flexibility Order*”) (emphasis added). Where a carrier meets the competitive criteria for “Phase I” pricing flexibility, it is freed from regulatory barriers to the reduction of special access rates below the applicable price caps, and where it meets the more stringent competitive criteria for “Phase II” pricing flexibility, it also becomes freer to raise its rates above the caps. A carrier’s qualification for Phase I or Phase II pricing flexibility is determined by reference to competition in the type of service at issue within the relevant geographic region, defined in terms of metropolitan statistical areas (“MSAs”). *Id.* at 14234-35 ¶¶ 24-25.

<sup>125</sup> *LEC Price Cap Review Order*, 10 FCC Rcd at 8989 ¶ 64.

<sup>126</sup> *See, e.g., June 22, 2009 Cicconi Letter* at 2-4. *See also* Patrick Brogan & Evan Leo, USTelecom, *High-Capacity Services: Abundant, Affordable, and Evolving*, at i (July 2009),

increasing success in MSAs of all density levels. FiberTower touts the increasing ubiquity of its competitive wireless-backhaul network, noting that it “covers approximately 12,000 route miles” and “backhaul service to over 6,000 mobile base stations.”<sup>127</sup> FiberTower also has testified that, through partnership and master lease agreements, it has the ability to access over 100,000 towers nationwide,<sup>128</sup> or almost half of the nation’s 220,000 towers. Clearwire, a well-funded WiMAX provider that will reach 120 million people in less than two years, has announced plans to rely on “almost exclusively microwave backhaul” to the exclusion of conventional special access services,<sup>129</sup> and the outcome of the Commission’s “white spaces” proceeding should help a variety of additional providers deploy such wireless backhaul services.<sup>130</sup> And the Chief Technology Officer of Sprint has admitted that microwave backhaul would be even *more* prevalent in the United States if the price of DS1s were not so *low*: “[R]elatively abundant and inexpensive T-1 lines have stifled the technology [wireless backhaul] here.”<sup>131</sup>

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*available at* [http://www.ustelecom.org/uploadedFiles/News/News\\_Items/High.Capacity.Services.pdf](http://www.ustelecom.org/uploadedFiles/News/News_Items/High.Capacity.Services.pdf) (“[H]igh-capacity services are characterized by growing demand, expanding competition, declining prices, continued investment, and ongoing innovation. This is due, at least in part, to the current regulatory regime set in place by the Federal Communications Commission (FCC) in 1999.”).

<sup>127</sup> Testimony of Ravi Potharlanka, COO, FiberTower Corp., before the House Subcommittee on Communications, Technology and the Internet (May 7, 2009).

<sup>128</sup> *Id.*

<sup>129</sup> Clearwire Corporation Q4 2008 Earnings Call Transcript (Mar. 5, 2009), *available at* <http://seekingalpha.com/article/124559-clearwire-corporation-q4-2008-earnings-call-transcript?source=bnet>.

<sup>130</sup> See White Paper, *Optimizing the TV Bands White Spaces*, attached to Ex Parte Letter from Michele C. Farquhar, FiberTower Corp. and Rural Telecommunications Group, Inc., to Marlene H. Dortch, FCC, ET Docket Nos. 04-186, 02-380, at 7 (Oct. 2, 2007); T-Mobile Comments at 19; Sprint Nextel Comments at 24-25.

<sup>131</sup> Stephen Lawson, The Industry Standard, *Sprint Picks Wireless Backhaul for WiMAX* (July 9, 2008), *available at* <http://www.thestandard.com/news/2008/07/09/sprint-picks-wireless-backhaulwimax>.

Cable operators are likewise investing billions of dollars in advanced fiber-optic infrastructure to compete in the market for high-capacity business services.<sup>132</sup> And because these and other intermodal providers often bypass ILEC networks altogether, they fly under the radar of the Commission's collocation-based tests for gauging competition levels.<sup>133</sup> If anything, therefore, those tests are underinclusive, not overinclusive, as some commenters continue to argue.<sup>134</sup>

Tellingly, the same carriers that seek special access re-regulation on the theory that ILECs "monopolize" special access markets have persistently refused to disclose data regarding their own facilities-based entry, and have sought to discourage the Commission from collecting such data. Presumably, if the data supported their claims regarding the purported dearth of special access competition, they would willingly submit that data. The fact that they have not done so, and have repeatedly opposed collection of that data by the Commission, is highly probative about what the data would show. The Commission could not properly reverse course on its prior findings of special access competition unless (among other things) it first required those carriers to produce data providing details about the locations and prices of their own

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<sup>132</sup> Optimum Lightpath, *Our Network*, <http://www.optimumlightpath.com/ourNetwork.shtml>; Scott Moritz, *TheStreet.com*, *Cablevision's Got Fiber* (Sept. 20, 2006), <http://www.thestreet.com/p/newsanalysis/techtelecom/10310196.html>; Mike Farrell, *Multichannel News*, *Cablevision Revs Up for Business Blitz* (Sept. 24, 2006), available at [http://www.multichannel.com/article/83521-Cablevision\\_Revs\\_Up\\_for\\_Business\\_Blitz.php](http://www.multichannel.com/article/83521-Cablevision_Revs_Up_for_Business_Blitz.php); Cox Business, *Cox Optical Internet*, <http://www.coxbusiness.com/products/data/opticalinternet.html>; J. Baumgartner, *Light Reading's Cable Digital News*, *Cox Biz: Cable's Next Billionaire?* (Nov. 25, 2008), available at [http://www.lightreading.com/document.asp?doc\\_id=168563&site=cdn](http://www.lightreading.com/document.asp?doc_id=168563&site=cdn).

<sup>133</sup> See *AT&T Supplemental Special Access Reply Comments* at 45.

<sup>134</sup> See, e.g., *Cbeyond Comments* at 6-7.

special access services, the extent to which they have self-provisioned such services, and the additional locations they could service by extending those facilities.<sup>135</sup>

Re-regulation of special access in the absence of such additional data would be particularly unjustified given that competition has in fact translated into lower prices for special access customers in price flex areas. Although some prices have risen, as they do in any competitive market, the average prices that customers actually pay in Phase II MSAs have decreased significantly since the grant of flexibility. Just as important, the prices are not just lower overall, but more economically efficient. Like prices elsewhere in the economy, they are now set by the forces of supply and demand, not by command-and-control regulation. By encouraging competitive supply where needed, and by freeing prices to seek their competitive equilibriums, the Commission's free-market policy has ensured that special access customers benefit in both the short and long runs.

Some commenters claim that special access prices are nonetheless "too high" and that the Commission should therefore repeal or sharply curtail the price flex rules. There is no record basis for such a regulatory about-face. First, the proponents of re-regulation inflate apparent prices in price-flex areas by focusing exclusively on undiscounted month-to-month tariff rates, which are analogous to the premium rates one might pay for individual airline tickets on the day of departure. But AT&T and other providers have responded to growing competition by offering large discounts from those base rates. The average rates that customers *actually pay* for special

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<sup>135</sup> See Letter of Glenn Reynolds, Vice President – Policy, USTelecom, to Marlene Dortch, Secretary, FCC, WC Docket No. 05-25 (Apr. 27, 2009) (detailing the data the Commission would need to collect to obtain a complete picture of the extent of competition for special access services).

access services in price-flex MSAs, most accurately measured by AT&T's average revenue per unit, have thus decreased significantly since the inception of the price flex regime in 1999.<sup>136</sup>

Second, the advocates of re-regulation compare these base rates to artificial benchmarks that reveal nothing about where prices in a competitive special access market should be. These benchmarks include price-cap rates forced down by years of mechanical percentage-based (“X-factor”) reductions that no one has ever justified economically and rates derived from TELRIC, whose application the Commission has long discredited in this context. In particular, even before the Commission questioned the methodological integrity of TELRIC in 2003,<sup>137</sup> it had deliberately kept artificially low TELRIC rates from undermining special access pricing, in part to avoid “undercut[ting] the market position of many facilities-based competitive access providers,” a “mature source of competition in telecommunications markets.”<sup>138</sup>

The proponents of re-regulation next turn from ILEC special access *prices* to ILEC special access *margins*, relying on ARMIS accounting data for the proposition that ILECs earn unseemly rates of return. But these supposed overearnings are just artifacts of ARMIS's misallocation of costs and investment to different categories of service—errors that make ARMIS data essentially worthless as a tool for calculating rates of return on individual categories of interstate services like special access.<sup>139</sup> Because ARMIS radically understates special access

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<sup>136</sup> AT&T *Supplemental Special Access Reply Comments* at 23-26.

<sup>137</sup> Notice of Proposed Rulemaking, *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers*, 18 FCC Rcd 18945, 18964-65 ¶¶ 50-51 (2003).

<sup>138</sup> Supplemental Order Clarification, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 9587, 9597 ¶ 18 (2000), *aff'd*, *Competitive Telecomms. Ass'n v. FCC*, 309 F.3d 8 (D.C. Cir. 2002).

<sup>139</sup> See, e.g., AT&T *Supplemental Special Access Reply Comments* at 47-49; P. Bluhm & R. Loube, National Regulatory Research Institute, *Competitive Issues in Special Access Markets*—

*costs* while accurately reporting special access *revenues*, the result is a grossly overstated rate-of-return figure for these services. And even if these service-specific ARMIS numbers did cast light on the profitability of special access services, it would be unreasonable to slash special access margins in isolation while leaving intact the miniscule (and sometimes negative) margins that ILECs earn on many of their other services.<sup>140</sup> Any such regulatory reversal would imperil the capital resources carriers need to build out next-generation broadband facilities to underserved communities, thwarting the precise objective Congress has instructed the Commission to pursue.

Apart from their attacks on pricing flexibility, the proponents of special access re-regulation also seek sharp reductions in the prices charged for *price-capped* special access services, including the TDM-based DS1 and DS3 services generally offered over copper loop facilities. As an initial matter, such proposals would be irrelevant to this proceeding even if they had some empirical basis (which, as discussed below, they do not). Legacy TDM-based special access services will play an ever-diminishing role in the broadband environment, where providers will require high-capacity fiber or microwave transmission facilities to ensure backhaul speeds of 50 to 100 Mbps, scalable up to 1 Gbps. Indeed, if anything, driving down the rates charged for use of DS1 and DS3 circuits would only give carriers perverse short-term incentives to avail themselves of the government-mandated price break and avoid building or leasing the next-generation fiber backhaul facilities needed to bring America into the new broadband era.

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*Revised Edition*, at 70 (2009) (“[T]he RBOCs contend that the ARMIS figures are virtually meaningless. We agree with the RBOCs.”).

<sup>140</sup> *AT&T Supplemental Special Access Reply Comments* at 36.

In all events, proposals to reduce price-cap levels lack any empirical basis and, like calls to eliminate the pricing flexibility regime, would be as harmful to consumers in the long run as they are unnecessary to protect consumers in the short run. First, “reinitializing” rates to bring them closer to some rate-of-return benchmark would, like any other form of rate-of-return regulation, weaken the incentives of regulated parties to act efficiently in the future—the very regulatory dilemma that caused the Commission to abandon rate-of-return regulation for price caps in the 1990s.<sup>141</sup> Second, it would be just as unreasonable to subject special access rates to percentage-based X-factor reductions on a year-to-year basis, either to accomplish essentially the same margin-reducing outcome as explicit reinitialization or to reflect hypothetical efficiency gains unique to special access services. The courts have repeatedly invalidated the Commission’s efforts to ratchet interstate access rates down through such mechanical formulas in the absence of hard evidence that those formulas accurately reflect any efficiency gains in the interstate access market beyond those felt in the economy as a whole.<sup>142</sup> Here, there is no evidence of such efficiencies, and the likely result of any effort to impose new such reductions would just be litigation and eventual judicial invalidation.

The Commission should likewise reject calls to restrict the ability of ILECs to offer their customers term, volume, multiproduct, or geography-wide discounts.<sup>143</sup> Such discounts are

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<sup>141</sup> See, e.g., *LEC Price Cap Review Order*, 10 FCC Rcd at 8973-74 ¶¶ 27-29.

<sup>142</sup> See, e.g., *United States Tel. Ass’n v. FCC*, 188 F.3d 521 (D.C. Cir. 1999) (invalidating X-factor as unsupported by substantial evidence of productivity enhancements).

<sup>143</sup> See Initial Comments of WilTel Communications, LLC, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, at 13-15 (filed June 13, 2005); Comments of CompTel/ALTS, Global Crossing North America, Inc., and NuVox Communications, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, at 11-20 (filed June 13, 2005); Comments of ATX Communications Services, Inc., Bridgecom International, Inc., Broadview Networks, Inc., Pac-West Telecomm, Inc., US LEC Corp., and U.S. Telepacific Corp. d/b/a Telepacific Communications, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, at 35-39 (filed June 13, 2005).

routine in markets throughout the economy, and they are presumptively pro-consumer unless they involve either (i) predatory below-cost pricing or (ii) an illegal tying arrangement, under which a customer *cannot* purchase one product without purchasing another.<sup>144</sup> The discount plans at issue here involve neither predatory pricing nor tying, and any new prohibitions in this area—even if they survived judicial review—would leave customers worse off by preventing ILECs from offering service packages that respond to the needs and desires of customers.<sup>145</sup>

Again, these disputes about non-rural special access services, which have only the most attenuated relevance to this proceeding, should be distinguished from issues concerning the middle-mile transmission services needed to bring next-generation broadband Internet access to rural America. AT&T agrees that the government may have an important role to play—in its capacity as a broadband grant provider—in helping defray the unusually high costs of middle-mile transport in remote areas that result from low population density, which hinders facilities-based investment. The Recovery Act stimulus plan illustrates one respect in which the government can play this type of constructive role. For example, Level 3 is reportedly positioning itself to benefit from that stimulus program by building out middle-mile fiber facilities to connect its Internet backbone to the networks of rural broadband grant recipients.<sup>146</sup>

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<sup>144</sup> See generally *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993). In *BellSouth Telecommunications Inc. v. FCC*, 469 F.3d 1052 (D.C. Cir. 2006), the D.C. Circuit upheld a volume-based discount structure for ILEC special access services and repudiated the Commission’s economically unjustified attempts to limit such discounts.

<sup>145</sup> Indeed, discount plans come in so many forms, and can have such divergent effects depending on context, that trying to catalog and regulate them all *ex ante* in a rulemaking would be a fool’s errand. If customers or competitors believe that a particular discount program violates the Act, they can always bring that claim to the Commission for resolution.

<sup>146</sup> See, e.g., Paris Burstyn, Ovum.com, *Level 3: ‘middle-mile’ requirements* (2009), <http://www.ovum.com/news/euronews.asp?id=7958>; see also Kelly Teal, xchangemag.com, *Global Crossing: Stimulus Must Include Middle Mile* (May 14, 2009), <http://www.xchangemag.com/articles/global-crossing-stimulus-include-middle-mile.html>.

And the Plan should propose additional targeted support for rural communities using other mechanisms, including universal service funding. But the Plan should not reintroduce heavier price regulation into the markets for traditional special access services.

**2. The Plan Should Reject Proposals to Regulate Broadband Internet Access**

Various commenters use this proceeding to seek onerous regulatory requirements for broadband Internet access providers. The proposed regulations include (i) “unbundling” (or “open access” or “bitstream access”) requirements, which would grant unaffiliated ISPs or CLECs rights of physical access to each broadband platform; and (ii) “nondiscrimination” rules beyond the existing four Internet freedoms that would restrict the ability of broadband providers to grant preferential treatment to packets associated with performance-sensitive applications such as high-definition video or multi-player online gaming. The latter proposal has never been adopted in any context and, as discussed below, should not be adopted now. The proposed “unbundling” rules are discredited relics of a pre-broadband era of monopoly regulation, when consumers generally had no choice other than the local circuit-switched telephone network to connect them to information services. Such rules have no place in the competitive broadband world of 2009.

**a. Increased Regulation of Broadband Internet Access Would Thwart, Not Promote, the Objective of Universal Broadband Availability and Adoption**

The unregulation of broadband Internet access, like the unregulation of the Internet more generally, was not the invention of “George W. Bush’s administration,” as Free Press and a few others contend. *See, e.g.*, Free Press Comments at 16. It was instead the official policy of this Commission stretching back to the Clinton Administration.

In the late 1990s, there were two main providers of broadband Internet access: cable companies and, to a much lesser extent, the telco providers of DSL service. The telcos were still subject to the legacy “unbundling” requirements that the Commission had adopted for the monopoly environment of the early 1980s, but the Commission refused to impose any such requirements on cable broadband providers, despite their overwhelming market share.<sup>147</sup> Although the Commission delayed for several years before bringing the telcos into competitive parity with cable companies, it repeatedly indicated throughout the final years of the Clinton Administration that such parity, if and when it came, would involve *removing legacy “unbundling” regulation* from the telcos rather than extending it to cable companies.

In particular, under the leadership of William Kennard, the Commission rejected proposals in 1999 and 2000 to impose “open access” requirements on cable operators in connection with its merger-review authority, in part because the Commission found that “the potential for competition from alternative broadband providers” would suffice to protect consumer interests.<sup>148</sup> As the Commission explained in 1999, because “different companies are using different technologies to bring broadband to residential consumers,” and because “each

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<sup>147</sup> Alone among the cable companies, Time Warner agreed to participate in an “open access” experiment in 2000 as a condition of winning the FTC’s approval of its merger with AOL. As discussed below, that experiment was an apparent failure.

<sup>148</sup> Order, *Applications for Consent to the Transfer of Control of Licensees and Section 214 Authorizations from MediaOne Group to AT&T*, 15 FCC Rcd 9816, 9872-73 ¶ 127 (2000); see also Order, *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from TCI to AT&T*, 14 FCC Rcd 3160, 3197-98 ¶¶ 74-75 (1999) (declining to impose open access requirement because, *inter alia*, “many other firms already are deploying or seeking to deploy high-speed Internet access services to residential customers using other distribution technologies, and . . . some of these firms may emerge as competitors”). The Kennard Commission also voted 4-1 (over the lone dissent of Commissioner Furchtgott-Roth) to file an amicus brief urging the Fourth Circuit to invalidate a municipal open-access mandate for cable modem providers. See Br. for the FCC and the United States, *MediaOne Group, Inc. v. County of Henrico, Virginia*, Nos. 00-1680(L) and consolidated cases (4th Cir. filed Aug. 9, 2000).

existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers,” the Commission did “not foresee the consumer market for broadband becoming a sustained monopoly or duopoly,” and consumers would likely benefit instead from robust “intermodal competition, like that between trucks, trains, and planes in transportation.”<sup>149</sup>

Likewise, also in 1999, the Commission first limited the network elements subject to mandatory unbundling under Section 251(c)(3) and (d)(2) in order to preserve ILEC incentives to build out broadband network infrastructure. Specifically, with one narrow exception, the Kennard Commission insulated ILECs from any obligation to unbundle the “packet switching element” (including routers and DSLAMs) in order to avoid “stifl[ing the] burgeoning competition in the advanced service market. . . . [I]n such a dynamic and evolving market, *regulatory restraint on our part may be the most prudent course of action in order to further the Act’s goal of encouraging facilities-based investment and innovation.*”<sup>150</sup> More generally, as the Kennard Commission explained to the regulators of foreign nations: “To ensure that the Internet is available to as many persons as possible, the FCC has adopted a ‘hands-off’ Internet policy.

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<sup>149</sup> Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 14 FCC Rcd 2398, ¶¶ 48, 52 (1999).

<sup>150</sup> Third Report and Order and Fourth Further Notice of Proposed Rulemaking, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 3696, 3840 ¶ 316 (1999) (emphasis added). *See also id.* at 3840 ¶ 317 (“Our overriding objective, consistent with the congressional directive in section 706, is to ensure that advanced services are deployed on a timely basis to all Americans so that consumers across America have the full benefits of the ‘Information Age.’ The advanced services marketplace is a nascent one. Although some investment has occurred to date, much more investment in the future is necessary in order to ensure that all Americans will have access to these services. . . . We decline to unbundle packet switching at this time, except for the limited exception described above.”).

We are in the early stages of global Internet development, and policymakers should avoid actions that may limit the tremendous potential of Internet delivery.”<sup>151</sup>

As discussed above, this policy of unregulation has succeeded spectacularly. It has coincided with an explosive growth of broadband and the unparalleled success of the modern Internet. And with only two limited, provider-specific exceptions in the 12-year history of consumer broadband services—exceptions that the Commission promptly addressed through *ex post* enforcement proceedings, *see* Section III.B, *supra*—broadband providers have heeded consumers’ insistence on access to an open Internet and to the applications, content, and services of their choice.

A few commenters nonetheless propose new schemes of maximal Internet regulation on the basis of a dystopian misconception of the state of broadband in America. They argue that the U.S. broadband marketplace is a shambles and that America can keep from falling “further behind” the rest of the world only if it imposes burdensome regulation on the companies that make discretionary multi-billion-dollar investments in broadband networks. There are two basic problems with this argument. First, its empirical premise—that the broadband market is “broken”—is false. Second, even if that premise were true, it would logically support the opposite policy outcome: less regulation rather than more.

As discussed in Section I.C above, it is a false premise that America’s broadband marketplace “dribbles out bandwidth at high prices” (Consumers Union Comments at 30) or that it has fallen into “such a deep hole that it may not be possible to completely dig ourselves out of it” (Free Press Comments at 25). Again, as the FTC’s professional staff concluded two years ago

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<sup>151</sup> Federal Communications Commission, *Connecting the Globe: A Regulator’s Guide to Building a Global Information Community*, at sec. IX (1999), available at <http://www.fcc.gov/connectglobe/sec9.html>.

in a report unanimously adopted by all five FTC commissioners, the broadband marketplace is in fact characterized by “fast growth [and] declining prices for higher-quality service.”<sup>152</sup> And since then, new entrants like Sprint/Clearwire have entered the market, adoption has recently accelerated, and competition has driven broadband providers to offer higher speeds and more creative packages in order to attract and keep customers.<sup>153</sup> However much remains to be done, the notion that America’s broadband marketplace has fallen into “a deep hole” is untenable.

In any event, as discussed above, the solution to the country’s remaining broadband deficiencies is to give providers additional incentives to build out their networks to new communities, not—as Free Press, Consumers Union, and others suggest—to inflict new regulations on them as they contemplate risking billions of dollars in additional broadband investments. As economists from across the political spectrum agree, such regulations would deprive these investment decisions of their economic logic.<sup>154</sup> And empirical studies confirm what economic logic suggests: Each time the government has *relaxed* regulatory burdens on broadband providers, those providers have responded by expanding their networks and dropping their prices.<sup>155</sup> Empirical research likewise confirms that the reimposition of forced-sharing

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<sup>152</sup> See Federal Trade Commission, *Staff Report: Broadband Connectivity Competition Policy*, at 160 (2007), available at <http://www.ftc.gov/reports/broadband/v070000report.pdf> (“*FTC Net Neutrality Report*”).

<sup>153</sup> *Pew 2009 Report* at 7; Time Warner Comments at 10 (discussing new DOCSIS 3.0 technology); Comcast Comments at 3-4 (same).

<sup>154</sup> See, e.g., William J. Baumol et al., AEI-Brookings Joint Center, *Economists’ Statement on Network Neutrality Policy*, at 1 (2007), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=976889#PaperDownload](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=976889#PaperDownload) (“[I]ntroducing price regulation risks discouraging the healthy process of risk-taking innovation—which is especially important in telecommunications.”).

<sup>155</sup> See Thomas W. Hazlett, *Broadband Regulation in the United States: An Empirical Assessment* (June 14, 2007); Thomas W. Hazlett, *Rivalrous Telecommunications Networks with and Without Mandatory Sharing*, 58 Fed. Comm. L.J. 477 (2006).

obligations would reduce investment in high-capacity fiber facilities: precisely the outcome Congress seeks to avoid.<sup>156</sup>

In short, the argument for “fixing” the (unbroken) broadband marketplace through increased regulation is a non-sequitur. If increased regulation deters providers from building next-generation broadband networks, there will be no networks for anyone to use—not the consumers whom Congress has properly made the focus of this proceeding, and certainly not the unaffiliated ISPs, CLECs, and other “intramodal” resellers championed by the advocates of increased regulation. As former Chairman Kennard has emphasized, “[p]olicymakers should rise above the net neutrality debate and focus on what America truly requires from the Internet: getting affordable broadband access to those who need it.”<sup>157</sup> The same is equally true of proposals for “open-access” and “unbundling” regulation, which are discussed next.

**b. The Commission Should Reject Calls for the Reimposition of Monopoly-Era “Unbundling” or “Separation” Schemes**

The comments of Free Press and similar groups reveal an odd nostalgia for the telecommunications landscape of 1994. Back then, regulators treated telephone companies like natural monopolies; the term “intermodal competition” had not yet been invented; consumers could gain access to the Internet only through dial-up connections; and the numbers they dialed for such access were assigned to standalone ISPs, which served as intermediaries of necessity

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<sup>156</sup> See Mercatus Center Comments at 16-17 (citing Thomas W. Hazlett & Anil Caliskan, *Natural Experiments in U.S. Broadband Regulation* (Feb. 2008), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1093393](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1093393); DotEcon & Criterion Economics, *Competition in Broadband Provision and Its Implications for Regulatory Policy*, at 117-18 (Oct. 2003), available at <http://www.dotecon.com/publications/BRTfull15-10-03.pdf>; and Scott Wallsten, AEI-Brookings Joint Center for Regulatory Studies, *Broadband and Unbundling Regulations in OECD Countries* (2006), available at <http://aei-brookings.org/admin/authorpdfs/redirectsafely.php?fname=../pdffiles/phpSV.pdf>).

<sup>157</sup> William E. Kennard, N.Y. Times, *Spreading the Broadband Revolution* (Oct. 21, 2006), available at <http://www.nytimes.com/2006/10/21/opinion/21kennard.html>.

between the narrowband, circuit-switched telephone network and the Internet. This, the regulatory maximalists suggest, was the golden age of the Internet. Never mind that consumers were stuck with one platform (voice-grade telephone lines) and download speeds between 28 and 56 kilobits per second. What seems to matter most to some commenters is that millions of consumers reached the Internet by dialing up telephone numbers associated with hundreds of different ISPs unaffiliated with the telephone company. These commenters seem almost to regret that broadband's rapid advance over the ensuing 15 years, despite its obvious and profound *consumer* benefits, has made these independent, non-facilities-based ISPs less relevant to consumers and their original business plans less commercially viable.

Indeed, these commenters view the decline of the independent, non-facilities-based ISP as a “market failure” in its own right—as a self-evident basis for trying to restore these ISPs to their former prominence and shoehorning them into an industry structure that no longer accommodates their original business plans. And to jump-start that process, these commenters propose bringing back the *Computer Inquiry* rules, all adopted between the 1970s and 1980s, which entitled such ISPs to purchase, at tariff, the transmission functions underlying ILEC information services, “unbundled” from the retail information service.<sup>158</sup> A few commenters further ask the Commission to tear the long-integrated operations of broadband providers apart into “structurally” (or “functionally”) separate wholesale and retail corporate entities, *see, e.g.*,

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<sup>158</sup> *See, e.g.*, Tentative Decision and Further Notice of Inquiry and Rulemaking, *Amendment of Section 64.702 of the Commission's Rules and Regulations*, 72 F.C.C.2d 358 (1979); Final Decision, *Amendment of Section 64.702 of the Commission's Rules and Regulations*, 77 F.C.C.2d 384, 475 (1980); Report and Order, *Amendment of Section 64.702 of the Commission's Rules and Regulations*, 104 F.C.C.2d 958 (1986) (“*Computer III Phase I Order*”).

Public Knowledge Comments at 25-26, even though the Commission repudiated such structural separation rules as antiquated and counterproductive *in 1986*.<sup>159</sup>

The *provider*-oriented regulatory outlook of these commenters, however, is the antithesis of the *consumer*-oriented perspective at the heart of sound public policy. The objective of telecommunications policy is not to prop up the obsolete business plans of particular providers, but to make consumers better off. Here, blaming free-market dynamics for the diminished relevance of non-facilities-based ISPs is a bit like blaming the modern computer industry for the demise of independent typewriter-cartridge manufacturers, or blaming the mass production of dependable quartz watches for the marginalization of skilled watchmakers. The market evolves; some companies rise, and others fail. But *consumers* prosper, and that is the sole measure of sound regulatory policy.

In fact, these “unbundling” proposals are so anachronistic that even the most zealous advocates of net neutrality regulation abandoned them years ago, recognizing that they do not fit the economic and technological realities of the broadband world. In 2003, for example, Tim Wu rejected any “strict open-access requirement” on the ground that it would “threaten[] the vertical relationship required for certain application types” by “prevent[ing] broadband operators from architectural cooperation with ISPs for the purpose of providing QoS dependent application[s.]”<sup>160</sup> Lawrence Lessig expressed a similar preference in 2001 for net neutrality principles (which he called “end-to-end”) instead of—and as a “more direct” and less “invasive”

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<sup>159</sup> *Computer III Phase I Order*, 104 F.C.C.2d at 964 ¶ 3 (“[W]e replace structural separation for the enhanced services operations of AT&T and the BOCs with nonstructural safeguards [because] the structural separation requirements impose significant costs on the public in decreased efficiency and innovation.”).

<sup>160</sup> *See, e.g.*, Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. Telecomm. & High Tech. L. 141, 150 (2003) (“*Wu Network Neutrality*”); *see also id.* (“Competition among [non-facilities-based] ISPs does not necessarily mean that broadband operators will simply retreat to acting as passive carriers in the last mile.”).

alternative to—“‘open access’ requirement[s]” or other obligations “to unbundle local access services.”<sup>161</sup>

Against this backdrop, the calls of some commenters for “unbundled” wholesale access to transmission platforms on regulated terms—or, more radically, their calls for structural separation for broadband providers into wholesale (transmission) and retail (information service) components<sup>162</sup>—would be quaint if they were not so misguided. In fact, they are untenable in several independent respects.

*First*, as AT&T has explained in its opening comments, the broadband marketplace in this country is not just technologically dynamic, but pervaded by robust cross-platform competition: that is, competition not only between resellers using the same underlying facilities, but also—and more importantly—competition among different technological methods of bringing broadband to consumers. In all but the most rural areas of this country, there are now at least two vigorously competitive wired providers (cable and telco), multiple 3G wireless providers (including independent wireless providers such as Sprint and T-Mobile), the actual or imminent entry of a well-funded WiMAX provider (Clearwire), as well as satellite broadband

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<sup>161</sup> Lawrence Lessig, *The Future of Ideas* 248-49 (2001).

<sup>162</sup> Although the discussion below focuses on why traditional “unbundling” rules would be both unnecessary and affirmatively counterproductive, the same would be true, to an even more extreme degree, of proposals for “functional” or “structural” separation or compelled divestiture of certain lines of business: a type of regulatory experiment this country tried in the early 1980s (in the form of the *Computer II* rules and the AT&T divestiture) and abandoned many years ago. As recently conceded by Columbia Professor Eli Noam—once a proponent of such radical measures—“American history . . . suggests that structural solutions, while intellectually appealing, create major transaction costs and retard network evolution. There are better ways to protect users and competitors.” Eli Noam, FT.com, *Separating Telecoms?* (May 15, 2009), <http://www.ft.com/cms/s/0/8b149b84-41a1-11de-bdb7-00144feabdc0.html>.

providers.<sup>163</sup> Indeed, the United States is the only major country where cable operators have—and have always had—more broadband subscribers than traditional telephone companies.

Even if one disregards the wireless and satellite providers and focuses solely on the take-no-prisoners competition between cable and telco broadband providers, that competition distinguishes today's broadband marketplace from yesterday's monopolistic narrowband world—and forecloses any sensible application of the legacy telco-specific rules designed for that world.<sup>164</sup> It also sharply distinguishes the United States from nations with facilities-sharing obligations. As Verizon documents, those nations lack any comparable experience with intermodal competition. Verizon Comments at 12, 23, 85. And the regulators in those nations have therefore opted, as a second-best solution, to mandate synthetic competition within the

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<sup>163</sup> Proponents of heavy regulation often note that two of the wireless providers with nationwide spectrum rights and infrastructure are affiliated with providers of wired broadband services (AT&T and Verizon). What they often overlook is that any given part of the country lies within the wireline ILEC footprint of *at most one* of those carriers, and many parts of the country lie outside the wireline footprint of both. In any given place, therefore, there is at most one wireless 3G provider affiliated with a provider of wired broadband service in that place, and several that are not.

<sup>164</sup> See, e.g., Ed Gubbins, TelephonyOnline.com, *Comcast blames telcos, economy for net-adds dropoff* (Feb. 18, 2009), [http://telephonyonline.com/residential\\_services/news/comcast-net-subscriber-growth-0218/](http://telephonyonline.com/residential_services/news/comcast-net-subscriber-growth-0218/) (“We believe the RBOCs priced more competitively, more dramatically lower, to win some share in the short term,” said Stephen Burke, Comcast’s chief operating officer.” But Comcast “is fighting back: 66% of the high-speed data customers Comcast added last year converted from DSL versus 44% two years ago.”); Kelly Riddell, Bloomberg, *Comcast Targets Small Business, Boosts Sales Force (Update1)* (April 29, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ankObYXoRgik> (“Comcast Corp. is bumping up phone and Internet sales efforts aimed at small businesses, a market that may reach \$30 billion in annual revenue, as phone companies invade cable’s residential turf with new television options.”); Nat Worden & Vishesh Kumar, Wall Street Journal Online, *Comcast Feels Strain of Economic Slump* (Feb. 19, 2009), <http://online.wsj.com/article/SB123495645910509841.html> (economic woes and “new competition for television and Internet service from telecommunications giants such as Verizon Communications Inc. and AT&T Inc. weighed on the company’s subscriber growth, a trend also reflected in the quarterly results of rival Time Warner Cable Inc., released earlier this month”).

single platform even though, as they acknowledge, doing so suppresses private investment incentives.

This trade-off is aptly described in the report of a recent Aspen Institute colloquy between Blair Levin and a leading British telecommunications regulator:

*[Blair] Levin did emphasize, and other participants agreed, that competition between two pipes is significant, and that countries with both upgraded cable and telephone infrastructure are far better off—in terms of enjoying the benefits of competition—than those with a broadband monopoly. In the case of the United Kingdom, where cable providers have not made significant broadband rollouts, the regulatory authority mandated that British Telecom (BT) separate its wholesale and retail arms, requiring BT to treat retail suppliers the way they treat their own suppliers. . . . Ofcom’s William Webb . . . acknowledged that *the wholesale/retail split does leave BT with a limited incentive to build out fiber*].<sup>165</sup>*

In short, whatever merit “unbundling” and “separation” policies might have in foreign countries stuck with a broadband monopoly (which is often either owned or subsidized by the State), those policies have no place in a broadband marketplace that, like America’s, is characterized by strong intermodal competition and a reliance on private capital investments to serve consumer needs. In addressing this issue, Free Press appears almost disappointed that the “historical accident” of intermodal competition in the United States removes the key justification for the type of heavy European-style regulation it favors. Free Press Comments at 84.<sup>166</sup>

Nor is there any merit to the concerns raised by Consumers Union and others about the future of intermodal broadband competition or their corresponding insistence that synthetic, “intramodal” competition is indispensable to consumer “choice.” In assessing these views, the

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<sup>165</sup> Aspen Institute, *A Framework for a National Broadband Policy*, at 21 (2008), available at [http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/A\\_Framework\\_for\\_a\\_National\\_Broadband\\_Policy\\_0.pdf](http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/A_Framework_for_a_National_Broadband_Policy_0.pdf) (emphasis added).

<sup>166</sup> Covad similarly calls for “[p]reserving the legacy copper plant” in fiber-rich environments and imposing old-style “rate-of-return[] pricing methodology” for competitive fiber deployments. Covad Comments at 1-2. Such proposals might conceivably have made sense in the one-wire world of the early 1980s, but they make no sense now.

Commission should recall what these same groups predicted half a dozen years ago about the future of voice telephony. At issue was the elimination of the “UNE platform,” the regulatory contrivance that permitted CLECs to provide voice telephone services using only network elements, leased from the ILEC. Consumers Federation of America admonished then: “If the FCC fails to preserve the UNE-Platform (UNE-P)[,] competition will be devastated.”<sup>167</sup> Similar groups warned that “[i]f the UNE-P is eliminated, the impact on residential competition will be devastating,”<sup>168</sup> because the absence of intramodal competition on the ILEC network would “foreclose any competitive choice for mass-market residential and small business customers for the foreseeable future.”<sup>169</sup> But then as now, these commenters underestimated the dynamism of the competitive telecommunications marketplace, particularly the prospects for facilities-based competition in the supposed “monopoly” telephone market. Indeed, according the Commission’s most recent data, the ILECs lost more than *50 million* voice lines between December 1999 and December 2007,<sup>170</sup> and those line losses have been *accelerating* in the last two years in the face of fierce intermodal competition from wireless and cable VoIP service providers. The lesson is plain: Rather than wasting another decade in litigation of the promotion

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<sup>167</sup> Consumer Federation of America, *Caution Flag in the FCC’s Race to Eliminate the Unbundled Network Element Platform*, at 1 (June 21, 2004), available at <http://www.consumerfed.org/pdfs/cautionflag.pdf>.

<sup>168</sup> Letter from Robert S. Tongren, Ohio Consumers’ Council, to Commissioners, FCC, WCB Docket No. 01-338, at 3 (filed Dec. 16, 2002).

<sup>169</sup> Initial Comments of the UNE Platform Coalition, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338, at 4 (filed Apr. 5, 2002).

<sup>170</sup> Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *Local Telephone Competition: Status as of December 31, 2007*, at tbl. 1 (Sept. 2008), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-285509A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-285509A1.pdf).

of artificial “intramodal” competition, the Plan should embrace policies that create incentives for facilities deployment and innovation.

*Second*, it is entirely unclear how any unbundling obligation would work in practice, and its implementation would be fraught with engineering conundrums, particularly given rapid changes in network architecture, all implemented in reliance on the *absence* of such sharing requirement. In any event, the project would present no benefits in exchange for the obvious burdens it would inflict. In the history of cable modem service, only one provider—Time Warner Cable—has undertaken a regulatory obligation to share its infrastructure with unaffiliated ISPs (in return for FTC approval of Time Warner’s 2000 merger with AOL). That experiment was an apparent failure. As one commentator explained, the “unaffiliated ISPs that . . . obtained access to AOL-Time Warner’s cable modem systems under the FTC’s merger clearance order” chose not to collocate “within AOL-Time Warner’s headends” but instead piggy-backed off of “AOL Time Warner’s existing ISP facilities”<sup>171</sup>—in other words, they became little more than mere portals. This was telling. “Open access” advocates had long sought rules requiring cable companies to separate the ISP and last-mile transmission components of broadband Internet access and to lease the transmission component on regulated terms to unaffiliated ISPs. In the Time Warner episode, however, the ISPs with FTC-supervised rights to lease the transmission component within the cable network apparently did not even exercise those rights. This episode thus indicates either that such forced sharing proposals are infeasible from an engineering perspective or that “integrating ISP and last-mile operations does

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<sup>171</sup> Christopher Yoo, *Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. Telecomm. & High Tech. L. 23, 55-56 (2004).

in fact yield real efficiencies”—efficiencies that benefit consumers but would be lost under artificial “unbundling” rules.<sup>172</sup>

**Third**, the legal and policy agendas proposed by the pro-regulation commenters would be unlawful simply as a matter of statutory interpretation, even apart from their lack of any defensible policy justification. Insofar as these commenters argue that broadband Internet access is (or contains) a “telecommunications service” within the meaning of 47 U.S.C. § 153(46) and is thus subject to automatic common carrier regulation, that position contradicts not just a string of Commission decisions since 2002 adopting the contrary conclusion, but also decisions of the Supreme Court and the Third Circuit upholding that contrary Commission conclusion (as applied to cable modem and wireline broadband services, respectively).<sup>173</sup> Any reversal of the Commission’s longstanding position on that issue would expose the Commission to substantial litigation risks, destabilize the industry, and—like other destabilizing regulatory decisions—create disincentives for further facilities-based investment.<sup>174</sup>

**c. The Plan Should Reject Calls for the Imposition of a “Dumb Pipes” Mandate or a Fifth, “Nondiscrimination” Principle**

As discussed in Section III.B above, the Commission has consistently addressed net neutrality concerns through *ex post*, case-by-case adjudication under the four principles of the *Internet Policy Statement*. This is the only sound means of overseeing this nascent and rapidly

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<sup>172</sup> *Id.*

<sup>173</sup> See *National Cable & Telecommunications Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005); *Time Warner Telecom, Inc. v. FCC*, 507 F.3d 205 (3d Cir. 2007).

<sup>174</sup> And insofar as these commenters urge the Commission to include broadband-specific ILEC facilities within the list of network elements subject to mandatory unbundling under Sections 251(d)(2) and 271, that position contradicts not just the Commission’s repeated conclusions that such unbundling would violate the statutory scheme and harm rather than help the cause of competition, but also the D.C. Circuit’s several decisions *embracing* the logic and lawfulness of those conclusions. See, e.g., *Earthlink, Inc. v. FCC*, 462 F.3d 1 (D.C. Cir. 2006); *United States Telecom Ass’n v. FCC*, 359 F.3d 554, 578-585 (D.C. Cir. 2004).

evolving marketplace. And this case-by-case approach has succeeded in addressing the two, limited instances in the history of consumer broadband services—the Madison River and Comcast/BitTorrent controversies—in which a broadband provider faced plausible allegations that it violated those four principles. *See* note 105, *supra*.

Several commenters nonetheless urge the Commission to adopt a preemptive scheme of command-and-control regulation, characterized by the forced commoditization of broadband networks, strict technological limits on network-management tools, and permanent, inflexible constraints on the means of recovering broadband network costs.<sup>175</sup> Given the technological and commercial fluidity of the broadband marketplace, such rules would likely become obsolescent soon after adoption. More important, imposing such prescriptive regulations now, particularly in the absence of any evidence of a systemic market failure, would succeed only in deterring broadband providers from continuing to make the multi-billion-dollar investment gambles essential to the future of the broadband Internet.<sup>176</sup> AT&T has covered most of this ground in its opening comments and in its submissions in the pending net neutrality rulemaking proceeding (WC Docket No. 07-52), but because the same parties continue making the same invalid arguments,<sup>177</sup> AT&T briefly summarizes the main points once more in these reply comments.

Free Press and a few other commenters continue to champion an extreme “dumb pipes” version of a nondiscrimination requirement: In their words, “[n]o Internet packets should be given priority over others—whether the priority comes in the form of access, latency or bandwidth.” Free Press Comments at 163. Free Press keeps invoking this slogan for its populist

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<sup>175</sup> *See, e.g.*, Consumers Union Comments at 19; Public Knowledge Comments at 8.

<sup>176</sup> *See, e.g.*, *AT&T Net Neutrality Comments* at 71-85; Reply Comments of AT&T Inc., *Broadband Industry Practices*, WC Docket No. 07-52, at 34-41 (filed July 16, 2007).

<sup>177</sup> *See, e.g.*, Consumers Union Comments at 19; Public Knowledge Comments at 8; Center for Democracy & Technology Comments at 10.

appeal, but it has no merit. Even net neutrality advocates such as Google, CCA, and Tim Wu recognize that consumers benefit when broadband networks give some packets priority over others by “prioritiz[ing] packets of a certain application type due to latency concerns (*e.g.*, VoIP or streaming video)[.]”<sup>178</sup>

Indeed, as those commenters acknowledge and AT&T has previously explained,<sup>179</sup> the Internet has *always* given some packets “priority over others.” The engineers who designed the modern Internet long ago recognized the need to build intelligence into the Internet Protocol precisely to enable networks to prioritize the packets associated with performance-sensitive applications such as video.<sup>180</sup> Google has further explained that, in a more general sense as well, “the Internet today is not an absolutely ‘neutral’ place” because “the various servers, routers, and content delivery networks that comprise [the Internet] can and do distinguish routinely between various forms of traffic.”<sup>181</sup> For example, applications and content providers that can obtain the capital resources needed to buy access to a content delivery network (CDNs) such as Akamai—or to build their own such networks—give their end users better on-line experiences than

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<sup>178</sup> Google Comments at 30. *See also* Computer & Communications Industry of America Comments at 19-20 (“Acceptable bit discrimination could include: treating all packets of one type differently from all packets of another type, based on varying degrees of tolerance for delay (*e.g.*, voice versus streaming video versus e-mail messages); delayed transmission or blocking of all packets from the same untrusted source as an anti-virus or cybersecurity remedy; or network peak load routing and management techniques.”). *Accord Wu Network Neutrality* at 154 (“[C]ertain classes of applications will never function properly unless bandwidth and quality of service are guaranteed [and the absence of network management] can interfere with applications development and competition.”).

<sup>179</sup> *See AT&T Net Neutrality Comments* at 37-38.

<sup>180</sup> *See id.* at 38-39 (discussing (i) a 1981 RFC describing 8-bit “Type of Service” segment on packet headers as “provid[ing] an indication of the abstract parameters of the quality of service desired” for “networks [that] offer service precedence” and (ii) a 1994 RFC describing methods for “divid[ing] traffic into a few administrative classes and assign to each a minimum percentage of the link bandwidth under conditions of overload”).

<sup>181</sup> Google Comments, *Broadband Industry Practices*, WC Docket No. 07-52, at 2 (July 16, 2007).

providers without such resources, and, as a direct result, they are more likely to succeed in the marketplace.<sup>182</sup> This is as it should be: Market forces, not regulatory edicts, determine which services will receive higher performance levels over the public Internet. Significantly, no one, not even those who advocate absolute neutrality on the Internet, suggests this is a “problem,” let alone one that requires a regulatory fix.

But the “dumb pipes” approach to network management is not merely unnecessary and inconsistent with the design and history of the Internet; it also would do much harm. By inflicting a regime of artificial unintelligence on broadband networks, this approach would undermine consumer welfare by keeping consumers from obtaining innovative, or even critical, reasonably priced services over finite-capacity broadband networks. Few who have thought seriously about these issues actually support a dumb pipes approach, because few people wish, in the words of David Farber and Michael Katz, to forbid a network operator “to favor traffic from, say, a patient’s heart monitor over traffic delivering a music download.”<sup>183</sup>

Other parties mean something different—though still somewhat nebulous—when they propose a “nondiscrimination” rule. Although these parties would allow broadband networks to discriminate in favor of packets associated with performance-sensitive applications, they propose restricting the commercial agreements that broadband providers may negotiate with applications or content providers.<sup>184</sup> Under one version of this proposal, such agreements would be banned outright; under another, such agreements would be permitted but would be subject to the functional equivalent of common carrier obligations. Under this common carrier requirement, if

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<sup>182</sup> *AT&T Net Neutrality Comments* at 14-20, 63-66.

<sup>183</sup> David Farber & Michael Katz, Wash. Post, *Hold Off On Net Neutrality*, at A19 (Jan. 19, 2007).

<sup>184</sup> *See generally AT&T Net Neutrality Comments* at 79-85 (discussing parties advocating such a rule).

a broadband provider enters into such an arrangement with one applications or content provider, it would have to offer the same arrangement to any similarly situated provider—a requirement like the ban on “unjust and unreasonable” discrimination that Congress originally imposed on telephone monopolists in the single-wire world of 1934.<sup>185</sup>

AT&T has explained in multiple submissions why all these proposals would be at once unnecessary and counterproductive, but a few points merit recapitulation here.<sup>186</sup> *First*, the Commission should not intervene in the broadband market—or in any other market for Internet-based services—without a clear showing of market failure justifying such intervention. Here, the proponents of preemptive regulation have identified no “failure” in the provision of performance-enhancing services for latency-sensitive applications—neither in the enterprise context, where such services have thrived for years without controversy, nor in the mass-market context, where such services have not yet even been offered. And no market failure is likely to arise, given the technological dynamism and competitiveness of the broadband market.

*Second*, the consumer-pays-all rule favored by some commenters would both (i) raise consumer prices, thereby exacerbating the digital divide, and (ii) depress investment incentives by depriving broadband networks of an efficient source of cost recovery: namely, consensual performance-enhancement agreements with the applications and content providers that deliver large volumes of QoS-needy traffic. *Third*, the “in for a penny, in for a pound” ethic of common-carrier-type regulations, designed for monopolistic and static markets, has no place in today’s competitive and exceptionally dynamic broadband marketplace, and any such regime would deter efficient, pro-consumer experimentation with new business models and alliances.

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<sup>185</sup> See 47 U.S.C. § 202; see generally *Orloff v. FCC*, 352 F.3d 415 (D.C. Cir. 2003) (discussing Section 202 nondiscrimination standard).

<sup>186</sup> See, e.g., AT&T Comments at 98-115; see also *AT&T Net Neutrality Comments* at 79-85.

Against this backdrop, it is no surprise that in 2007, after an exhaustive year-long inquiry into the broadband marketplace, the FTC’s professional staff and all five FTC commissioners found no “significant market failure or demonstrated consumer harm from conduct by broadband providers” and warned that “[p]olicy makers should be wary of enacting regulation solely to prevent prospective harm,” because “[i]ndustry-wide regulatory schemes—particularly those imposing general, one-size-fits-all restraints on business conduct—may well have adverse effects on consumer welfare.”<sup>187</sup> Similarly, the OECD, which monitors market conditions and develops regulatory policy proposals for its 30 member nations, found that “[t]here is little evidence of anti-competitive conduct” in broadband markets and that “it seems premature for governments to become involved at the level of network-to-network traffic exchange and demand neutral packet treatment for content providers.”<sup>188</sup> This same skepticism of nondiscrimination proposals is shared by Internet founders David Farber and Robert Kahn, by former FCC Chairman William Kennard, by preeminent economists such as Michael Katz, Gerald Faulhaber, William Baumol, and Alfred Kahn, and by publications as diverse as the *Washington Post*, the *Wall Street Journal*, and the *Economist*.<sup>189</sup> The Commission should heed these voices of caution before marching down the path to full-blown regulation of the Internet.<sup>190</sup>

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<sup>187</sup> *FTC Net Neutrality Report* at 11.

<sup>188</sup> Organisation for Economic Co-operation and Development, *Internet Traffic Prioritisation: An overview*, at 5 (Apr. 6, 2007), available at <http://www.oecd.org/dataoecd/43/63/38405781.pdf>.

<sup>189</sup> See *AT&T Net Neutrality Comments* at 3-4 & n.7, 84 n.223 (citing sources); NCTA Comments, *Broadband Industry Practices*, WC Docket No. 07-52, at 3-4 & nn.7, 9 (filed June 15, 2008) (same).

<sup>190</sup> Finally, there is no merit to the suggestion of Public Knowledge that the Commission should impose “nondiscrimination” rules in order to promote “free speech [principles] embodied by the First Amendment.” Public Knowledge Comments at 9. The First Amendment cannot conceivably support regulatory intervention in the broadband market. The Internet is largely a collection of privately operated networks, built with private funds. And it is black-letter law that

#### **D. Both Spectrum Caps and Expanded Roaming Rules Would Undermine the Broadband Deployment Goals of the Plan and the Recovery Act**

As scores of commenters agree, “[w]ireless broadband platforms will be central to meeting national broadband goals.”<sup>191</sup> In the words of Commissioner Cops, “wireless broadband can be an efficient means of delivering both backhaul and ‘last-mile’ access services in rural areas.”<sup>192</sup> Further, the mobile (or “broadband to the person”) feature of wireless broadband offers unique flexibility that many customers value as much as (or more than) raw throughput speeds.<sup>193</sup> Particularly as wireless providers upgrade their networks to offer faster and faster speeds, wireless broadband service will become increasingly popular as a supplement to and replacement for wired service.<sup>194</sup>

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the private operators of those networks are not subject to the obligations the First Amendment places on the government. To the contrary, the First Amendment limits *the government’s* authority to interfere with the expressional and editorial rights of such private parties. *See, e.g., Miami Herald Publishing Co. v. Tornillo*, 418 U.S. 241 (1974).

<sup>191</sup> Verizon Comments at 7. *See also* AT&T Comments at 127-28; CTIA Comments at 4; T-Mobile Comments at 2; Motorola Comments at 22; Sprint Nextel Comments at 5; Cricket Communications Comments at 2-3.

<sup>192</sup> Michael J. Cops, Commissioner, Federal Communications Commission, *Bringing Broadband to Rural America: Report on a Rural Broadband Strategy*, at ¶¶ 142 (May 22, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291012A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291012A1.pdf) (“*Rural Broadband Report*”).

<sup>193</sup> CTIA Comments at 5 (emphasis removed). *See also* Consumers Union Comments at 11 (proposing that the Plan endorse provision of “first mile connectivity with advanced wireless technologies” and arguing that maximum coverage, and not super-fast speeds, should be the focus of the National Broadband Plan); CTIA Comments at 1, 5; AT&T Comments at 62-63 (discussing the unique advantages of wireless broadband in public safety and homeland security); Sprint Nextel Comments at 40-44 (citing the advantages of wireless broadband in schools, homeland security systems, businesses, health care centers, and the daily lives of consumers); Verizon Comments at 18-20 (discussing how wireless broadband can contribute to job creation and economic growth).

<sup>194</sup> New research estimates that, by 2014, over 100 million subscribers will be using high-speed, LTE-based mobile broadband services. Dusan Belic, IntoMobile, *Juniper Research: There will be over 100 million LTE subscribers by 2014* (July 9, 2009), <http://www.intomobile.com/2009/07/09/juniper-research-there-will-be-over-100-million-lte-subscribers-by-2014.html>.

But all of that hinges on the availability of adequate spectrum. As Public Knowledge explains, “[i]t is a truism to the point of cliché” that wireless broadband services require wireless *spectrum*—the essential raw material of any wireless broadband system. Public Knowledge Comments at 38. And providers will need *more* spectrum as wireless broadband is deployed to serve the varied purposes of the Recovery Act, and as adoption and usage continue to grow. Larger spectrum blocks will be required to support high-quality, congestion-free service for spectrum-hungry data and video applications: As Public Knowledge has recognized in a related context, “Congressional policy . . . favors networks with enough upload and download capacity” to provide efficient transmission of content.<sup>195</sup> And wireless providers will also need enough spectrum to preserve a reliable voice system, emergency communications, and emergency alert capabilities.<sup>196</sup>

In the face of these technological realities, it is most surprising that Public Knowledge nonetheless argues for crippling the prospects of emerging wireless broadband alternatives by arbitrarily capping the spectrum that wireless companies need in order to reach Congress’s core objectives: affordable, better, and more widely available broadband services. *See* Public Knowledge Comments at 34; RTG Comments at 4-5. Public Knowledge does not—because it cannot—explain how a provider could offer consumers the state-of-the-art, bandwidth-intensive

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<sup>195</sup> *See* Comments of Free Press, Public Knowledge, Media Access Project, Consumer Federation of America, Consumers Union, New America Foundation, and Participatory Culture Foundation, *Petitions of Free Press and Vuze*, WC Docket No. 07-52, at 38 (filed Feb. 13, 2008).

<sup>196</sup> Likewise, the Commission should reject efforts by commenters such as the New America Foundation who advocate for opportunistic device use in licensed CMRS bands. Such use would cause significant interference to licensees and their customers. Indeed, after conducting extensive analysis of the potential feasibility of such opportunistic use in two NOIs and an NPRM, the Commission concluded that “no parties provided information on specific technical rules that we could adopt,” and accordingly terminated those proceedings. Order, *Establishment of an Interference Temperature Metric to Quantify and Manage Interference and to Expand Available Unlicensed Operation in Certain Fixed, Mobile, and Satellite Frequency Bands*, 22 FCC Rcd 8938, 8938 ¶ 2 (2007).

services they want while constrained by an arbitrary 95 MHz cap. *See* Public Knowledge Comments at 34. And it is not clear how a spectrum cap would enhance competition or serve the purposes of the Recovery Act by, for example, precluding the new WiMAX offering from Sprint/Clearwire, which plans to use its spectrum—far in excess of 95 MHz—to bring to market yet another broadband option for all Americans.<sup>197</sup> In short, a spectrum cap would almost certainly undermine expansion and innovation in wireless broadband. As CTIA explains:

[D]emand for mobile wireless broadband is projected to continue to increase. One study recently estimated that data traffic will grow at a rate about one hundred times greater than voice traffic over the next ten years. As described above, as wireless networks and handsets evolve to support additional broadband applications, network providers have invested billions of dollars in network improvements. However, network and handset efficiency improvements alone cannot meet the rising demand for mobile wireless broadband. While U.S. wireless carriers may lead the world in spectral efficiency, additional spectrum will be needed to accommodate rising demand.

CTIA Comments at 25-26. It is thus no surprise that most commenters urge that the Plan propose the release of *more* spectrum for wireless broadband services—not rules that would result in providers having less spectrum.<sup>198</sup>

Beyond this, spectrum caps—which the Commission eliminated in 2003<sup>199</sup>—are simply unnecessary to preserve adequate wireless competition. The wireless marketplace is robustly competitive. It includes four national wireless carriers, three large regional providers, and dozens of smaller providers. In addition, there are more than forty Mobile Virtual Network

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<sup>197</sup> Clearwire holds more than 100 MHz of spectrum in many markets and more than 150 MHz in some markets. Stephen Lawson, PC World, *Clearwire Still Sees Challenges After FCC OK* (Nov. 2008), available at [http://www.pcworld.com/businesscenter/article/153363/clearwire\\_still\\_sees\\_challenges\\_after\\_fcc\\_ok.html](http://www.pcworld.com/businesscenter/article/153363/clearwire_still_sees_challenges_after_fcc_ok.html).

<sup>198</sup> *See, e.g.*, Motorola Comments at 6-8; CTIA Comments at 26; Verizon Comments at 68-69; T-Mobile Comments at 13.

<sup>199</sup> Report and Order, *2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services*, 16 FCC Rcd 22668, 22669 ¶ 1 (2001) (announcing sunset of spectrum cap rule, effective January 1, 2003).

Operators (“MVNOs”) that lease airtime from facilities-based providers and then use it to compete against them (and each other). The vast majority of these wireless carriers offer national coverage, using a combination of their own facilities and roaming arrangements. The latest Commission data show that more than 95 percent of the U.S. population lives in census blocks with at least three competing wireless carriers, and more than half of the population lives in census blocks with at least five competing carriers.<sup>200</sup> And no single wireless carrier—not even the largest national carrier—has anything even approaching a dominant market share. Compared to other countries in the world, the U.S. wireless industry is the *least* concentrated of the 26 major industrialized countries followed by the OECD.<sup>201</sup>

In short, the competitive nature of the market—and the new competitors that have emerged over the past few years—confirm that the Commission was right to abandon any spectrum cap over five years ago. Indeed, under the pre-2003 spectrum cap, there were significantly fewer providers of wireless broadband, they offered fewer services, and they attracted fewer users. Since the spectrum cap was eliminated, usage has soared, and prices have declined rapidly. Competition also has intensified, with companies offering a variety of new technologies and subscription plans. New users have flocked to these new technologies and plans, and as a result, wireless broadband use has skyrocketed. *See* Qwest Comments at 19-20.

The Commission also should reject the WISP Association’s “spectrum homesteading” proposal, under which wireless broadband providers could obtain non-exclusive rights to spectrum that would become exclusive licenses if the providers satisfied certain service

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<sup>200</sup> Thirteenth Report, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 08-27, ¶ 2 (January 16, 2009).

<sup>201</sup> Letter from Christopher Guttman-McCabe, CTIA, to Marlene Dortch, FCC, RM-11361, GN Docket No. 09-51 & WC Docket No. 07-52, at 6 (May 12, 2009).

benchmarks. *See* WISPA Comments at 14. Congress foreclosed any such scheme by requiring that exclusive spectrum holdings be allocated by auction, *see* 47 U.S.C. § 309(j), and for good reason: Only through competitive bidding can a private holder of public spectrum resources give adequate assurance that it will put those resources to their best use.<sup>202</sup> Finally, by making unlicensed spectrum susceptible to licensing, this misguided “spectrum homesteading” proposal also would disrupt the markets for technologies, like Wi-Fi, that depend on stable blocks of unlicensed spectrum throughout the country. Indeed, that proposal is irreconcilable with the widespread support for use of unlicensed spectrum to deliver wireless broadband service.<sup>203</sup>

In sum, the current system of spectrum auctions—without spectrum caps or homesteading—has facilitated the unparalleled expansion of wireless technologies. No changes are needed to reinvent or re-restrict the ways in which spectrum is allocated or used. To the contrary, the Commission should make more spectrum available, and then enact stable rules that protect carriers’ rights to use that spectrum for the broadband services the country needs and consumers want.

For similar reasons, the Plan should not support expanding the automatic roaming rule to cover non-PSTN-based services or areas where the would-be roamer has its own spectrum rights.<sup>204</sup> Both proposals are at odds with the Recovery Act’s broadband deployment goals. In

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<sup>202</sup> *See* AT&T Comments at 137-38 (citing the Commission, which noted that “the use of competitive bidding to award . . . licenses, as compared with other licensing methods, will speed the development and deployment of new services to the public with minimal administrative or judicial delay, and will encourage efficient use of the spectrum”); Verizon Comments at 71. The one exception to this policy is the allocation of spectrum to public-safety and homeland-security agencies, whose sole mission is to protect the health and safety of the American public. *See* AT&T Comments at 62.

<sup>203</sup> *See, e.g.*, AT&T Comments at 136; Motorola Comments at 10; WISPA Comments at 3-4.

<sup>204</sup> *See, e.g.*, Cricket Communications Comments at 7-8 (“[T]he Commission should rule that wireless carriers must offer data roaming to other providers on just, reasonable, and non-discriminatory terms, and without any geographic restrictions.”).

each case, the proposed roaming entitlement would allow a wireless provider that has *not invested in its network* to free-ride off other competitors' pre-existing investments. Thus, rather than expanding the availability of broadband facilities or new, differentiated services, the two proposals would undermine providers' incentives to invest in their own networks. First, of course, a would-be roamer need not make use of its own spectrum if another carrier's network is automatically available to it—and thus it has every incentive to delay building it out as long as possible. As the D.C. Circuit just reaffirmed last week, it is “[p]erhaps an obvious point, but a decision that gives owners of telecommunications lines more control over access to those lines tends to increase the incentive for competitors to build competing lines.” *Ad Hoc Telecommunications Users Committee v. FCC*, No. 07-1426, slip op. at 16 (D.C. Cir. July 17, 2009). The same holds true for spectrum.

Expanding roaming rights would also depress investment incentives for the carriers who would be expected to supply unlimited roaming to their in-market competitors. As the Commission has recognized, network coverage is one of the key bases for carrier competition.<sup>205</sup> Yet under the expanded, in-market roaming regime that some parties advocate, any time a carrier expanded its coverage by investing in infrastructure, it would enjoy no advantage whatsoever, since it would immediately have to support its in-market competitor with the same expanded coverage. Thus, expanding roaming requirements could have the result of watering down investment and expansion by *all* wireless providers—a grim scenario that departs entirely from the robust broadband future the Recovery Act envisions.

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<sup>205</sup> Eleventh Report, *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*, 21 FCC Rcd 10947, 10989, 11000 ¶¶ 101, 133 (2007).

A data-roaming requirement would have the same perverse effect. For one thing, allowing one carrier to cannibalize the services that another carrier already has developed would do nothing to advance broadband build out and service development by new entrants. For another, carriers like AT&T are investing billions of dollars to develop and expand wireless broadband services to attract and serve their own customers. A new data-roaming requirement would impose additional sources of demand on these new or expanded networks, which could cause a degradation in quality and performance for *all* customers. That result not only is patently unfair; it also would seriously undermine the Recovery Act's goal of increasing broadband's usability and adoption. Beyond this, of course, as AT&T has explained elsewhere in detail, there is no lawful basis for imposing a common-carrier roaming requirement on wireless broadband information services.<sup>206</sup>

The Plan accordingly should reject any notion of expanding the roaming requirement and should instead reaffirm the existing framework for out-of-market voice roaming. That approach mirrors the type of commercial roaming arrangement the market produced even outside the regulatory regime; it protects consumers by ensuring comprehensive voice coverage; and it creates incentives for spectrum holders throughout the country to develop their own unique, differentiated networks, to advance and expand the choices and offerings available to consumers nationwide.

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<sup>206</sup> Reply Comments of AT&T Inc, *Wireless Telecommunications Bureau Seeks Comment on Commercial Mobile Radio Services Market Competition*, WT Docket No. 09-66, at 46-48 (filed July 13, 2009).

#### **IV. THE DEFINITION OF BROADBAND ADOPTED IN THE PLAN SHOULD BE CONSUMER-FOCUSED AND FLEXIBLE ENOUGH TO ENCOMPASS THE SERVICES THAT CONSUMERS WANT AND NEED**

As many commenters agree, the National Broadband Plan should define “broadband” from an end-user-focused perspective that accounts for the wide and evolving variety of customers, uses, and platforms that constitute the broadband ecosystem.<sup>207</sup> The concept must be flexible enough to encompass the full range of broadband services provided to commercial and residential customers at all different income levels—and to machines as well as individuals.<sup>208</sup> And the services those users want range from the very fastest, most advanced wireline service offered at premium prices to the most economical service that provides basic, always-on Internet access. The concept of “broadband” must also be flexible enough to encompass wireless services of all types, so that consumers such as public safety officials or rural health care providers covering large areas can get the broadband service that fits their needs.<sup>209</sup> In short, the Plan’s definition of “broadband” must be expansive enough to embrace all of these different needs and all of the services that can satisfy them.

In defining broadband, the Commission also should remember that “broadband” is not a monolithic concept. As explained in AT&T’s opening comments, broadband describes not only

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<sup>207</sup> See, e.g., Center for Democracy & Technology Comments at 21-22; Consumers Union Comments at 1; Sprint Nextel Comments at 3-6; T-Mobile Comments at 11-13; Telecommunications Industry Association Comments at 24; Verizon Comments at 4-5, 26-27, 36, 42; CTIA Comments at 27; Cricket Communications Comments at 1-4; Comcast Comments at 7-17; NCTA Comments at 6-7; Ad Hoc Comments at 4-6.

<sup>208</sup> See AT&T Comments at 8-9, 18; Verizon Comments at 26; see also International Telecommunication Union, *ITU Internet Reports 2005: The Internet of Things—Executive Summary*, at 3 (Nov. 2005), available at [http://www.itu.int/osg/spu/publications/internetofthings/InternetofThings\\_summary.pdf](http://www.itu.int/osg/spu/publications/internetofthings/InternetofThings_summary.pdf) (“[C]onnect[ing] everyday objects and devices to large databases and networks” represents “the future of computing and communications”).

<sup>209</sup> See Sprint Nextel Comments at 5; AT&T Comments at 17; T-Mobile Comments at 12; Cricket Communications Comments at 2-3; Rural Cellular Associations at 8-9.

Internet access services, but also broadband transmission services and a wide range of other services and applications, including IP television, voice over IP, virtual private networks, digital television, cloud computing, and online search utilities.<sup>210</sup> Thus, a single-minded focus on promotion of Internet access services, which some commenters advocate,<sup>211</sup> would ignore a number of other services that the Plan should address, such as managed broadband services that a hospital might need for internal communications, or a broadband video service. And a regulatory approach that works well for one category of broadband services may fail when applied to others.<sup>212</sup> Thus, as various commenters note, the Commission should keep in mind the many differences among these types of broadband services as it develops the details of the Plan.<sup>213</sup> The Commission also must recognize that insofar as providers are able to offer more services over their platforms, consumers are likely to enjoy lower prices for any particular service.

The Plan should also reject proposals to define broadband rigidly based on specific throughput thresholds.<sup>214</sup> As many commenters argue, an excessive focus on throughput for

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<sup>210</sup> AT&T Comments at 13-14. *See also* Google Comments at 9; Comcast Comments at 8; Ionary Consulting Comments at 2 (“We posit that the word [broadband] is not a simple noun. Trying to treat it as a single thing can only result in failure.”).

<sup>211</sup> *See, e.g.,* It’s the Internet Stupid, *Comment on A National Broadband Plan For Our Future, Notice of Inquiry, FCC GN Docket No. 09-51* (June 8, 2009), available at <http://itstheinternetstupid.com/>.

<sup>212</sup> *See* AT&T Comments at 13-14; Ionary Consulting Comments at 3 (“The PSTN is not the Internet, and a Title V[I] Cable Service is not the Internet, but these can all be carried across broadband transmission facilities. Treating all of them as one can only cause problems.”).

<sup>213</sup> *See, e.g.,* Comcast Comments at 8 (noting that the *Notice and Recovery Act* “use the term ‘broadband’ imprecisely” and that “[i]t is important that the Plan be clear and consistent in its definition and use of these terms. As the *Notice* recognizes, *broadband networks* often serve as a platform for the delivery of a multiplicity of services, including *broadband Internet services*”); Ionary Consulting Comments at 2-3.

<sup>214</sup> *See, e.g.,* IEEE Comments at 2; Covad Comments at 14-15; New Jersey Rate Counsel Comments at 8.

these purposes would lead policymakers to deprive some Americans of broadband services altogether.<sup>215</sup> For example, excluding wireless services from the definition of broadband because they do not (yet) meet certain arbitrary speed thresholds may make it even less likely that consumers in rural or other high-cost areas will see *any* type of broadband service deployment. Similarly, a throughput-centric definition of broadband would disserve those consumers who do not want or need the fastest broadband service available.<sup>216</sup> Such “consumers” might include, for example, remote energy meters or lower-income individuals who cannot justify the expense of “gold-plated” service.

This does not mean that there is no place in the Plan for a discussion of throughput. As many commenters have recognized, realistic *aspirational* targets could be helpful in spurring the deployment of more advanced broadband services.<sup>217</sup> Comcast, for example, urges the Commission to adopt “benchmarks” in the Plan to facilitate “ubiquitous deployment of a basic level of broadband Internet service by 2011, with more advanced broadband Internet services being deployed to all Americans by 2016.” Comcast Comments at ii. Comcast notes that the Plan could support policies to help providers meet such benchmarks, “ranging from incentives for investment, to removal of barriers to deployment, to direct government investment.” *Id.*

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<sup>215</sup> See, e.g., Consumers Union Comments at 11; Google Comments at 22; T-Mobile Comments at 13; Cricket Communications Comments at 2; NCTA Comments at 6-7, 18 (“[D]efining broadband in a way that excludes certain technologies or demands speeds beyond what the marketplace is willing to pay ultimately will be counterproductive. Among other things, it will misdirect resources toward geographic areas and customers that already are taking advantage of the benefits of broadband technology, and away from areas and individuals that do not currently have access to broadband capability.”); Ad Hoc Comments at 7.

<sup>216</sup> See, e.g., Consumers Union Comments at 11; American Farm Bureau Federation Comments at 1-2.

<sup>217</sup> See, e.g., Comcast Comments at 10; NCTA Comments at 6.

AT&T agrees that such reasonable aspirational targets, if coupled with policies that make such targets attainable, could be a useful aspect of the Plan.

Finally, the Plan should reject the suggestion that broadband services and the Internet should be understood (and treated) like utilities or other public infrastructure, such as highways or canals.<sup>218</sup> Although commenters use this analogy as a justification for seeking the imposition of comprehensive, utility-like regulation on broadband services, such comparisons ignore fundamental differences. Most importantly, *private sector* investment built out, upgraded, and maintains the many broadband networks that cover our nation today—investment that was made without public-sector support and outside any government program.<sup>219</sup> And although the Recovery Act does supply some federal funding for the construction of additional broadband facilities, the Act neither advocates nor suggests that the goal is a *publicly-owned* government network, or even one that is primarily publicly funded.<sup>220</sup> Contrary to suggestions by some that

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<sup>218</sup> See, e.g., Public Knowledge Comments at 1 (“Plainly put, access to broadband has become an essential utility, as much as water and electricity are essential utilities. . . . [T]he foundation of the National Broadband Plan must rest on the belief that certain fundamental principles are too important to be left to the marketplace, as the government has done.”); *id.* at 6 (“Broadband has become an essential utility.”); Google Comments at 7; National Association of Neighborhoods Comments at 1 (“Broadband has become a necessary utility that should be available to every American.”).

<sup>219</sup> See NCTA Comments at 14 (“This track record of substantial private investment by multiple competing providers using different technologies distinguishes the broadband marketplace from the public/private partnerships that have characterized many utility services in the past. . . . The construction of the interstate highway system, for example, does not provide a strong analogy because it involved government-funded construction of a single government-owned network, not private construction of multiple competing networks.”); AT&T Comments at iv, vi, 2, 9, 78-81, 108-09, 129-30; Comcast Comments at 2-3, 31; NCTA Comments at i, 2, 9-10; Free State Foundation Comments at 4-5, 8.

<sup>220</sup> And many commenters point out that any such approach would have a negative effect on the rest of the broadband market. See David Hatch, CongressDaily, *Obama Advisor Looks at U.S.-Built Broadband Network* (May 26, 2009), available at [http://www.nextgov.com/nextgov/ng\\_20090526\\_2886.php](http://www.nextgov.com/nextgov/ng_20090526_2886.php) (“U.S. Built Broadband Network”) (discussing sources “caution[ing] that a government-subsidized network might dissuade private sector investment”); NCTA Comments at 19-20, 29, 31, 40-41 (citing Scott Cleland, *Why The Australian “Fiber Mae”*

the Plan should virtually “nationalize” broadband infrastructure,<sup>221</sup> it is self-evident, as discussed above, that Congress is counting on *private investment* to fill in the gaps in the nation’s networks and ensure 100 percent availability of broadband services.<sup>222</sup> It is important to bear this in mind in defining broadband and establishing associated policies. Whatever validity there might be to the government itself setting particularly narrow and high standards for a network *it* intended to build, own, and operate as a public utility, the standards and definitions the Plan sets *here* must work for the marketplace as a whole—and must sync up with the real-world commercial market, the needs of the consumers who will drive that market, and the private-sector providers and investors that will be key players in the next phase of this country’s broadband deployment.

## V. ESTABLISHING METRICS TO MEASURE PROGRESS

As the GAO notes, the National Plan must incorporate “clearly stated objectives” and “measures” that can be used to gauge advancement of the Plan’s goals.<sup>223</sup> The objectives—already discussed—are widely recognized: ensure 100 percent broadband availability and enable 100 percent broadband adoption by 2014. But the Commission must propose “clear,

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*Broadband Model Does Not Work For The US* (May 13, 2009), available at <http://precursorblog.com/content/why-australian-%E2%80%9Cfiber-mae%E2%80%9D-broadband-model-doesn%E2%80%99t-work-us> (“Government intervention in the marketplace through substantial subsidies or government ownership could be just as damaging as intrusive regulation, in addition to being staggeringly expensive. . . . [I]t could chill and discourage current private broadband investment by signaling that private investment may no longer be welcome in the broadband sector”); Free State Foundation Comments at 12.

<sup>221</sup> See, e.g., *U.S. Built Broadband Network* (“A senior advisor to President Obama is touting the idea of spending tens of billions of dollars in public funds to build a nationwide, state-of-the-art broadband network.”); see also Public Knowledge Comments at 1-2, 4-6, 44-47; *id.* at 26.

<sup>222</sup> See Section III.B, *supra*; see also Comcast Comments at 4, 21; NTCA Comments at iii, 4, 26-27, 40-41; Motorola Comments at 11-12; Windstream Comments at 3; Time Warner Cable Comments at 22. Even Google recognizes this point, noting that “neither the government nor the market alone has all the answers,” and “it will take both considerable focus and substantial resources—both private and public—to create a communications infrastructure capable of meeting the demands of the 21st century.” Google Comments at 6.

<sup>223</sup> *GAO Report* at 20.

straightforward, and relevant metrics” to measure achievement of those objectives, both in terms of accurately assessing the starting point where we find ourselves today,<sup>224</sup> and then determining what progress is made toward the agreed-upon milestones along the way. In the words of the Mercatus Center, the Plan must “define desired outcomes, develop measures, compare the likely outcomes and costs of alternative strategies, and establish a process for ex-post evaluation of actual outcomes and costs.” Mercatus Center Comments at 3.

**A. Although More Work Remains, the U.S. Broadband Marketplace Has Made Enormous Strides to Date, and the International Comparisons Cited for the Contrary Proposition Are Deeply Flawed**

The first step in any measurement framework is a determination of the starting place. To that end, as discussed above and as Commissioner Copps recently acknowledged, “we are not starting from scratch” in pursuing the Recovery Act’s broadband deployment and adoption goals.<sup>225</sup> That is an understatement. In just the past decade, terrestrial broadband providers have deployed facilities to over 90 percent of the population, and satellite broadband is available even more broadly; the number of broadband subscribers in the United States has grown from 1.8 million individuals *and* small businesses, to more than 70 million *residential* high-speed Internet subscribers, with dramatic increases in speed; the technological options, from cable modem to fiber-based services to Wi-Fi to LTE, have exploded; broadband providers have invested billions in private capital; and the markets for online services, content and applications have thrived.<sup>226</sup> On top of this progress, adoption rates only accelerated over the past year, and providers are

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<sup>224</sup> Comcast Comments at 27. *See also* NCTA Comments at 4, 8; AT&T Comments at 2.

<sup>225</sup> *Rural Broadband Report* ¶ 10.

<sup>226</sup> *See, e.g.*, Comcast Comments at 68-69; Verizon Comments at 12-22; AT&T Comments at 78-82; *GAO Report* at 16; Time Warner Comments at 7-11; NCTA Comments at 9-16.

offering subscribers higher speeds and more options.<sup>227</sup> In short, “the market for Internet services in the United States . . . is working well overall, as evidenced by nearly ubiquitous coverage, fast rates of adoption by consumers, continued large investments in infrastructure, and increasing speeds.” TPI Comments at 1.

To be sure, recent Pew data suggest that the average price of broadband service is higher now than it was in 2008, and is on par with the price of service in 2004.<sup>228</sup> Some inevitably will trumpet this as evidence of a “failure” in the broadband market justifying aggressive regulation, but the real picture is very much to the contrary.<sup>229</sup> Consumers today enjoy far more value for their broadband dollars than they did in 2004. For one thing, providers are offering higher speed for the same amount or less: For example, in 2004, AT&T offered 3 Mbps DSL service for \$45 per month. Today, AT&T offers 6 Mbps DSL service for \$35—twice the speed for \$10 less. Recent reports note that broadband providers also are competing by offering “bundles, free hardware” and other features in order to attract customers, offering consumers more for their broadband dollar.<sup>230</sup> Relatedly, consumers are *using* their broadband services far more today than they were in 2004. A study of usage patterns for AT&T’s DSL service shows that average bandwidth consumption per user *more than tripled* between 2004 and 2009. And in all events, in

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<sup>227</sup> *Pew 2009 Report; Broadband Speed Creep.*

<sup>228</sup> *Pew 2009 Report* at 24-29.

<sup>229</sup> Indeed, policymakers should be skeptical about the relevance of the Pew pricing data, which are based on impressionistic and insufficient inputs. For example, although the *Pew 2009 Report* sought to collect data about pricing for “basic” and “premium” service, it provided no definition of those terms, and instead allowed respondents to answer based on their own, individualized understandings of those service categories. The survey questions also did not distinguish among different tiers of “premium” speeds, and thus may have lumped in pricing for the very highest tiers, and compared those with much lower “premium” speeds or options available in prior years. And the survey is not weighted based on broadband usage, which affects the value of the service consumers get for their broadband dollars, as noted below.

<sup>230</sup> *See Broadband Speed Creep* (detailing providers’ efforts to lure customers with higher speeds, lower price offerings, technology, and other features).

a dynamic market where providers regularly adjust the feature sets of existing services and routinely introduce new services to keep up with their competitors, prices often fluctuate both downward and upward as market participants strive to find the optimum feature/price combinations that will attract and retain the largest number of customers.<sup>231</sup>

Policymakers should also dismiss the arguments of those who point to performance measures in other countries in an effort to support their advocacy for extreme regulatory action in the United States.<sup>232</sup> As the FTC, GAO, and others have explained, those comparisons lack merit as a means of assessing this country's relative broadband achievements.<sup>233</sup> First, the sources for data, and the ways in which the data are collected and categorized, often differ markedly across countries.<sup>234</sup> Second, these comparisons make no serious effort to account for radical country-to-country variances in population density, household size, geographical characteristics (such as average loop length), and the history of government subsidies for—or in

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<sup>231</sup> See First Report, *Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services*, 22 FCC Rcd 5954, 5984-85 ¶ 92 (2007) (“To some extent, virtually all competitive markets exhibit fluctuations in profit, including losses, and unanticipated shifts in demand and prices.”).

<sup>232</sup> See, e.g., Free Press Comments at 18-40; Public Knowledge Comments at 23-24. As discussed in Section III.C.2.a, this argument suffers not only from a false premise about the state of the U.S. broadband market, but also from incoherent logic: Even if the United States *had* fallen behind in broadband deployment and adoption, the proper policy response would be to impose lighter, not heavier, regulatory burdens on would-be builders of broadband networks.

<sup>233</sup> See, e.g., *FTC Net Neutrality Report* at 119 (“comparisons of broadband deployment and adoption rates across countries may not be meaningful,” given disparities in population density and the role of government subsidies); *GAO Report* at 25 (“countries’ rankings vary with the metric used”); Comcast Comments App. at 1 (observing that inconsistencies and limitations reduce the usefulness of comparisons and that research is needed to isolate the factors that contribute to broadband success); NCTA Comments at 23; TPI Comments at 2-8.

<sup>234</sup> See, e.g., Comcast Comments App. at 4-6 (citing problems with, for example, government self-reporting; different means of data collection across countries; and failures to account consistently for connectivity to business and institutional users); TPI Comments at 2.

some cases outright ownership of—broadband companies.<sup>235</sup> For example, the Organization for Economic Cooperation and Development (“OECD”) uses a *per capita* rather than per-household measure of broadband penetration, and that methodological choice artificially depresses penetration percentages in the United States, where households are typically larger than those in Europe or Asia. Similarly, the OECD measures exclude 3G mobile technologies and Wi-Fi, despite their importance to many U.S. broadband users.<sup>236</sup>

International broadband price comparisons are also of limited value, because the packages and bundles offered in one country may not mirror those in another, and because price differences may reflect real-world *cost* factors that are not constant across countries. *See, e.g.*, TPI Comments at 4. For instance, the lower monthly subscription prices OECD reports for Japan<sup>237</sup> are largely attributable to that country’s higher population density, shorter cable lengths, higher concentration of multi-family apartment buildings—and to the Japanese government’s history of heavy subsidies for broadband companies.<sup>238</sup>

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<sup>235</sup> TPI Comments at 7; NCTA Comments at 23. Free Press illustrates how parties with an agenda can manipulate statistics. In attacking the relevance of population density to broadband statistics, Free Press claims: “Iceland has one of the lowest population densities in the world, but it has the fifth-highest broadband penetration in the OECD.” Free Press Comments at 37 n.35. But Iceland has a “low population density” only if one counts all of the uninhabited tundra in the North and interior, which—precisely because it is uninhabited—is irrelevant to the broadband penetration analysis. Indeed, over 90 percent of Iceland’s 300,000-odd residents live in urban centers. *See* Central Intelligence Agency, *World Fact Book: Iceland*, <https://www.cia.gov/library/publications/the-world-factbook/geos/IC.html>. From a network-cost perspective, therefore, Iceland much more closely resembles Rhode Island or Delaware than, say, Colorado.

<sup>236</sup> *See* TPI Comments at 2-3; *OECD Broadband Subscriber Criteria*, [http://www.oecd.org/document/46/0,3343,en\\_2649\\_34225\\_39575598\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/46/0,3343,en_2649_34225_39575598_1_1_1_1,00.html); Comcast Comments App. at 3-4.

<sup>237</sup> Organisation for Economic Co-Operation and Development, *OECD Broadband Statistics, Broadband Average Monthly Subscription Price* (Oct. 2008), available at <http://www.oecd.org/dataoecd/22/44/39575002.xls>.

<sup>238</sup> *See* NCTA Comments at 23 (citing Japan’s differences in population density and government ownership in a large telecom provider).

To make matters worse, the OECD’s “methodology” for collecting and analyzing pricing data is deeply flawed and produces highly misleading results. Rather than performing a comprehensive review of the prices for broadband plans (including both standalone and bundled offerings) in each country, the OECD arbitrarily selects a handful of service offerings from a narrow set of providers in order to calculate a purported national average price for broadband. For example, despite the existence of nearly 1400 broadband providers in the United States,<sup>239</sup> the OECD’s pricing analysis for this country focuses on just three providers: AT&T, Verizon and Comcast. And among those providers, it looks only at four broadband plans each for AT&T and Verizon and just one plan for Comcast.<sup>240</sup> Worse still, the “average” U.S. price calculated by the OECD (\$53.21) is not weighted based on subscribership. Thus, Verizon’s 30 Mbps FiOS plan (priced at \$191 as of October 2006) counts just as much toward the national average as AT&T’s 1.5 Mbps DSL plan (priced at \$21)—despite the fact that the latter plan had *vastly* more subscribers (and is available far more broadly throughout the country) than the former. Indeed, the average price OECD lists for broadband in the United States is substantially higher than the average price paid by AT&T’s broadband customers. Given these deep flaws, any arguments grounded on the OECD’s pricing data are entirely meritless,<sup>241</sup> and policymakers should avoid the mistake of rotely citing that data as “evidence” that the U.S. broadband marketplace lags behind its international counterparts.

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<sup>239</sup> See *FCC High-Speed Services Report* at tbl. 7.

<sup>240</sup> See Organisation for Economic Co-Operation and Development, *OECD Communications Outlook 2007*, at 246 & tbl. 7.14 (2007), available at <http://213.253.134.43/oecd/pdfs/browseit/9307021E.pdf>. Moreover, the sole Comcast plan selected by the OECD appears to be a standalone offering with a significantly higher price point than Comcast’s more popular bundled offerings.

<sup>241</sup> See, e.g., Free Press Comments at 39.

Similar concerns undermine international comparisons of broadband speeds. Country-by-country differences in average broadband speed largely reflect differences in population density and topography. The State with the highest average speed in the United States is Delaware—a small, densely populated State—while the lowest-ranking State is Alaska, with its large land mass and widely dispersed population.<sup>242</sup> This factor likewise helps explain the supposed differences in speed between the United States and Europe, which is more urbanized and densely populated than the United States as a whole.

But even apart from this key variable, the notion that U.S. broadband speeds lag behind those in other countries is grossly overstated. Those assessments rely on the selective collection of data on *advertised* speeds by the OECD and others, *see* Comcast Comments App. at 4, which differ radically from the observed speeds collected in a more neutral manner by Akamai, the leading content-delivery network for the global Internet, whose analysis includes data collected from more than 100 million unique IP addresses worldwide.<sup>243</sup> For example, Akamai reports that average observed broadband speeds in Japan are 7 mbps,<sup>244</sup> which is lower by more than a factor of ten than the 92.8 mbps *advertised* speed reported by OECD,<sup>245</sup> and which is lower than the average observed speed for the State of Delaware.<sup>246</sup> Similarly, Akamai reports that the average observed speed in South Korea is 15 mbps (versus the 80.8 mbps reported by OECD),

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<sup>242</sup> See TPI Comments at 6-7; Akamai, *The State of the Internet Report: 4th Quarter 2008*, at 23 (2009) (“Akamai Report”).

<sup>243</sup> Akamai Report at 23. See also Scott Wallsten, Technology Policy Institute, *Understanding International Broadband Comparisons* (June 2009), available at <http://www.techpolicyinstitute.org/files/international%20broadband%20comparisons%202009%20update%20final.pdf> (analyzing Akamai Report and similar data from Speedtest.net).

<sup>244</sup> Akamai Report at 22.

<sup>245</sup> See OECD Broadband Statistics, *Average Advertised Broadband Download Speed, By Country, Sept. 2008*, <http://www.oecd.org/dataoecd/10/53/39575086.xls> (reporting 92,846 kbps).

<sup>246</sup> Akamai Report at 23.

and that the other “top” countries in the OECD ranking all exhibit average observed speeds of between 4 and 7 mbps. In fact, according to Akamai’s data, Delaware, New Hampshire, Connecticut, New York, Rhode Island, Nevada, Vermont, Oklahoma, Maine, Utah, Indiana, and Massachusetts all have average observed speeds that would place them among the top 10 countries in the world.<sup>247</sup> Thus, as with international comparisons of broadband pricing data, policymakers should exercise caution when evaluating international comparisons of broadband speeds based on advertised speed data collected by the OECD and others.

In sum, as the *New York Times* recently reported, there is strong reason to doubt “the constant refrain that the United States is falling behind in broadband, as if the speed of Internet service in Seoul represents a new Sputnik that is a challenge to national security,” and indeed one recent study concluded that “the United States comes out on top [among] 25 developed nations.”<sup>248</sup> Of course, more work remains to be done. But the significant achievements broadband providers have made in this country should not be understated. And the fact that private industry—and a supportive government regulatory environment—have achieved today’s level of deployment and penetration in just over a decade suggests cause for optimism that the remaining challenges can be met as well, especially when a concerted effort is made by all the stakeholders to put the right pieces in place.

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<sup>247</sup> *Id.*

<sup>248</sup> Saul Hansell, New York Times Bits Blog, *Surprise: America is No. 1 in Broadband* (Feb. 23, 2009), <http://bits.blogs.nytimes.com/2009/02/23/surprise-america-is-no-1-in-broadband> (citing Leonard Waverman & Kalyan Dasgupta, *Connectivity Scorecard 2009*, <http://www.connectivityscorecard.org/images/uploads/media/TheConnectivityReport2009.pdf>). *See also* Introductory Remarks by Robert McDowell, Commissioner, Federal Communications Commission, *Understanding Broadband Metrics: The Broadband Adoption Index*, Phoenix Center Workshop, Washington, DC (July 15, 2009), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-292023A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292023A1.pdf).

Indeed, the broadband progress of other countries *is* instructive from a policy perspective, regardless of the comparative value of hard data, because it reflects the type of concerted planning and policy support that AT&T and others advocate here. Specifically, several of the countries that have exhibited the most significant strides in broadband growth in recent years have done so by pairing targeted *supply-side* deployment efforts with *demand-side mechanisms*. South Korea, Canada, and Sweden, for instance, have provided financial support and tax incentives to spur deployment in underserved areas.<sup>249</sup> As discussed above, those countries, as well as Finland and Japan, have also invested in demand-stimulation policies, including online and community- and school-based digital literacy programs; a commitment to e-government and e-commerce; a focus on adoption by vulnerable populations like the elderly and the disabled; and cybersecurity efforts to make people more secure online. Australia, China, Singapore and other countries have also introduced subsidies for the price of broadband service or related equipment.<sup>250</sup> In other words, “governments of nations currently surpassing the United States in the OECD rankings are far more proactive in encouraging broadband adoption by stimulating demand for broadband services . . . [and supporting] private sector innovation.” Telecommunications Industry Association Comments at 32.

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<sup>249</sup> See *GAO Report* at 20-21.

<sup>250</sup> *Id.* at 19-21; Telecommunications Industry Association Comments at 32-34; see generally NCTA Comments at 29. Sweden, for instance, has instituted digital-literacy programs in the public and private sector; Finland has promoted content and services to stimulate demand, and it has ensured access to reasonably priced broadband; South Korea has used online education, as well as Information Education Centers at post offices and schools, and focuses efforts on the elderly and disabled; and Japan has e-government, e-commerce, cybersecurity, and other initiatives. *GAO Report* at 20; Telecommunications Industry Association Comments at 32-34.

**B. Several Tools Can Effectively Measure Progress Without Imposing Onerous New Reporting Obligations on the Market**

As AT&T has previously explained, policymakers will need to measure three components of broadband access to monitor the Plan’s success over time, as the Recovery Act requires: the availability, affordability, and usability of broadband. Existing mechanisms can be used to develop the necessary data with relatively little new effort, and using these mechanisms will be far more efficient and effective than devising new data collection efforts that burden providers and spawn disputes and confusion in the industry.

For example, as AT&T has discussed, broadband *availability* can best be measured through the existing broadband inventory mapping program already underway pursuant to the Broadband Data Improvement Act of 2008 (“BDIA”).<sup>251</sup> Many other commenters agree that the BDIA mapping projects should be a focus of the government’s efforts to measure broadband deployment throughout the country, supplemented by Census Bureau survey data that can provide insight into *perceived* availability from the consumer perspective.<sup>252</sup> And mapping should extend not just to households, but also to the businesses and public anchor institutions where consumers can access broadband services. As the American Library Association (ALA) points out, nearly 100 percent of public libraries offer Internet access to the public,<sup>253</sup> and

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<sup>251</sup> Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096, 4101 § 106(e)(10) (2008).

<sup>252</sup> AT&T Comments at 23-25; TPI Comments at 13-14 (noting “[t]he Broadband Data Improvement Act (BDIA) will go a long way to addressing data problems” but urging collaboration with the Census Bureau to conduct surveys to gain a fuller picture); Comcast Comments at 47-49; NCTA Comments at 32; Telecommunications Industry Association Comments at 14 n.31.

<sup>253</sup> Denise M. Davis et al., American Library Association, *Libraries Connect Communities: Public Library Funding & Technology Access Study 2007-2008*, at 27 (2008), available at <http://www.ala.org/ala/aboutala/offices/ors/plftas/0708/LibrariesConnectCommunities.pdf>.

approximately 76 percent offer wireless Internet connections.<sup>254</sup> Commenters such as the ALA and the Education and Library Networks Coalition are therefore right to stress that expanding BDIA mapping to include “the connectivity of anchor institutions such as libraries” as well as schools, hospitals, and other institutions “will give a clear picture of our progress toward ensuring that all Americans have access to broadband.”<sup>255</sup>

The Commission also already has the tools in place to measure *affordability*. To measure telecommunications service expenditures, the Commission already uses information from the Bureau of Labor Statistics, Bureau of Economic Analysis, and TNS Telecoms’s Bill Harvesting service, and this same approach could be used to measure expenditures related to broadband service and equipment. *See* AT&T Comments at 27-31; TPI Comments at 14. However, any affordability analysis should also account for the role anchor institutions play as affordable alternative sources of access for low-income individuals.<sup>256</sup> Finally, *usability* of broadband is best captured through the Commission’s Form 477, which gathers broadband subscription information at the census tract level, based on speed tier.<sup>257</sup> Census Bureau surveys can fill the

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<sup>254</sup> American Library Association, *U.S. Public Library Internet Connectivity* (2009), <http://ala.org/ala/aboutala/offices/ors/plftas/connectivity09.cfm> (providing data to be included in forthcoming 2008-2009 study).

<sup>255</sup> American Library Association Comments at 4; EdLiNC Comments at 9; Comcast Comments at 49.

<sup>256</sup> For example, in 71 percent of communities, libraries are the only locations in which community members may access the Internet free of charge. In the most-difficult-to-reach regions, that figure is even higher, constituting the only free access in 79 percent of rural communities. *See* American Library Association Comments at 3 (citing John Carlo Bertot et al., American Library Association, *Libraries Connect Communities: Public Library Funding & Technology Access Study 2008-2009* (forthcoming 2009)).

<sup>257</sup> *See, e.g.*, USTelecom Comments at 9-10 (supporting continued use of Form 477 to collect broadband data); Qwest Comments at 6-7, 10; *see also* New York Public Service Commission Comments at 13; NCTA Comments at 5.

gaps in usability information by gathering data about the broadband services consumers want and the barriers to adoption consumers face.<sup>258</sup>

In short, policymakers already have tools at hand to collect the data needed to measure the Plan's progress. And the record reflects a strong consensus in favor of relying on these tools rather than creating new processes, reporting obligations, or cumbersome modeling endeavors.<sup>259</sup> The latter approach would divert both policymakers and providers from deployment goals, both because it would require resource-intensive data-gathering efforts and because the inevitable disputes about the details would trigger expensive and time-consuming litigation.<sup>260</sup>

Furthermore, the additional information some commenters would require providers to generate would present few, if any, benefits to offset the added burden.<sup>261</sup> For example, it is unclear what value would be added by a new Commission-sponsored address-by-address broadband mapping effort,<sup>262</sup> given that mapping efforts under the BDIA are already underway at the sufficiently granular household level.<sup>263</sup> See Qwest Comments at 10. And any new

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<sup>258</sup> AT&T Comments at 34-35; Windstream Comments at 26-29; TPI Comments at 13-16.

<sup>259</sup> See, e.g., ITTA Comments at 14; EdLiNC Comments at 9; Windstream Comments at 26-28.

<sup>260</sup> See, e.g., Notice of Office of Management and Budget Action (Nov. 28, 2008) (OMB decision disapproving proposed information collection requirements as imposing an unjustified burden); Notice of Office of Management and Budget Action, OMB Control No. 3060-0568, at 1 (July 9, 2008) (disapproving proposed modification of information collection obligations that would have posed an undue burden on cable system operators).

<sup>261</sup> Similarly, as many commenters point out, the Commission's cost-modeling efforts in the past were largely unsuccessful, and it would be virtually impossible and hugely burdensome to construct a useful *broadband* cost model. See, e.g., AT&T Comments at 30-31; Comcast Comments at 57-58.

<sup>262</sup> See Communications Workers of America Comments at 9; Free Press Comments at 277-78 (suggesting address-by-address level data "should be strived for").

<sup>263</sup> See Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096, 4101 § 106(e)(10) (2008) (requiring a "baseline assessment of statewide broadband deployment in terms of households with highspeed availability").

address-by-address reporting obligations (as opposed to the more collective, private-public approach involved in most BDIA mapping efforts) would be especially cumbersome, given that many service providers do not collect such data in any type of uniform, household-based format.<sup>264</sup> Indeed, even some of the commenters that otherwise extol the value of household-level information nonetheless recognize that many carriers simply are not equipped to report at the address-by-address level. *See, e.g.*, Free Press Comments at 277-78.

Nor is there merit to the suggestion that the Plan should require the reporting of hypertechnical information, such as “contention ratios.” *See, e.g.*, Free Press Comments at 285; NASUCA Comments at 19. Contention-ratio data represent the number of subscribers whose broadband service has been designed to traverse a particular shared segment of a broadband network.<sup>265</sup> Such data do not convey meaningful information to consumers about real-world broadband speeds,<sup>266</sup> because the information-transfer speed a subscriber experiences is a function of myriad factors, such as the quality of the wiring at the consumer’s premises, the consumer’s computer and networking equipment; general Internet congestion, the responsiveness of the particular servers and networks the customer seeks to access, and many other technology-specific factors. Thus, the contention ratio for a discrete segment of a broadband network over

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<sup>264</sup> *See e.g.*, Windstream Comments at 27; Comments of AT&T Inc., *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, at 8-9 (filed July 17, 2008).

<sup>265</sup> There is no single “contention ratio” that applies to a broadband network, broadband subscriber, or given service. Contention ratios turn on both the number of subscribers and the amount of bandwidth available, and any given contention ratio is unique to the particular segment of the broadband network under observation at any point during the day. In the wireless context, in particular, the contention ratio may change frequently given changes in the number of users at any moment in time. *See AT&T Form 477 Reply Comments* at 7-8.

<sup>266</sup> *Id.* at 6.

which a given subscriber's Internet traffic is carried provides no useful information about the actual information-transfer speed that subscriber may experience.

In short, no possible benefit would be derived from requiring providers to collect and report contention ratios. But such a requirement would impose a huge burden. Although Free Press suggests that carriers “must absolutely know the contention ratios” on their networks, Free Press Comments at 286, that is incorrect. AT&T, for one, does *not* design, build, maintain, or upgrade its networks based on contention ratios and has no reason to track such information. *See AT&T Form 477 Reply Comments* at 8-9. And while Free Press attempts to bolster its claim by citing a handful of foreign providers that presently report contention ratios, the comparison is inapt. Free Press Comments at 286 nn.429-30. Those providers disclose only a *single*, network-wide contention ratio. By contrast, with nearly 1400 broadband providers and approximately 50,000 census tracts in the United States, the scope of the census-tract-level contention-ratio data that Free Press clamors for—and the burden associated with producing it—is multiple orders of magnitude greater than what is produced by the few international providers cited by Free Press, and it belies Free Press's cavalier insistence that “the Commission should dismiss arguments as to the burdens and feasibility of such a reporting system.”<sup>267</sup>

### **C. Data That Is Collected in Support of the Plan Should Be Protected**

Finally, the Plan must protect confidential and proprietary data supplied by broadband providers. Commenters such as NASUCA, Public Knowledge, Media Access Project, the New America Foundation, and U.S. PIRG urge the Commission to take a relaxed approach to confidentiality and proprietary concerns, loosening its standards and disclosing potentially competitively harmful information. *See NASUCA Comments* at 32-33; Public Knowledge et al.

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<sup>267</sup> Free Press Comments at 286.

Comments at 42. The Commission should reject those proposals and follow its strong record of protecting sensitive provider information, based on its well-grounded concern that serious harms could result from disclosure, including revelation of service providers' technologies and the proprietary arrangements struck by the *customers* of those providers.<sup>268</sup> Beyond this, as even Public Knowledge concedes, the more detailed the information that is collected, the more significant the potential threats to privacy, critical infrastructure and cybersecurity—which makes it all the more ironic that those who seek the most granular data also seek to reduce the level of protection afforded to such data. *See, e.g.*, Public Knowledge Comments at 43-44.

In sum, continuing to protect providers' sensitive data is a critical component of creating the stable regulatory environment needed to encourage broadband investment and promote the long-term interests of consumers.

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<sup>268</sup> *See* Reply Comments of AT&T Inc., *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, at 9 (filed July 16, 2007) (citing Commission statements); *see also id.* at 8-11 (describing the Commission's vigorous defense of confidential Form 477 data in FOIA litigation). The Commission's decision was upheld by a federal district court. *Ctr. for Pub. Integrity v. FCC*, 505 F. Supp. 2d 106, 116 (D.D.C. 2007), *reconsid. denied*, 515 F. Supp. 2d 167 (holding Commission properly concluded disclosure of zip code data could be competitively unfair and therefore was exempt from FOIA disclosure obligation).

## CONCLUSION

AT&T respectfully requests that the Commission carefully consider the recommendations and ideas set forth above when developing the National Broadband Plan. AT&T looks forward to working with the Commission, other policymakers, and other private-sector stakeholders toward the goal of making ubiquitous broadband a reality by February 2014.

Respectfully Submitted,

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