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To: [BOCrfc2015](#)
Cc: [Sarah Morris](#)
Subject: Broadband Opportunity Council comments from New America's Open Technology Institute
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Hello,

Please find attached a PDF of the comments from New America's Open Technology Institute in response to the Broadband Opportunity Council Notice and Request for Comments. Please let us know if you have any trouble viewing the attached document.

Best,
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**Comments of New America’s Open Technology Institute
to the Broadband Opportunity Council**

(via e-mail to BOCrfc2015@ntia.doc.gov)

I. Introduction

New America’s Open Technology Institute (OTI) welcomes the opportunity to respond to the Broadband Opportunity Council (“Council”) Notice and Request for Comments to inform the Council’s agenda to address challenges related to broadband access and adoption.¹ We support the Council’s broad goals to improve understanding of the ways in which “government can better support the needs of communities seeking to expand broadband access and adoption,” including identifying existing programs that currently support or could support broadband competition, deployment, and adoption, as well as identifying and removing regulatory hurdles that impede these goals. In these comments, we urge the Council and its Member Agencies to establish a shared vision and unified strategy for promoting better broadband investment and increasing adoption in all communities across the United States. If done effectively, we believe that the Council can significantly move the needle on broadband outcomes in the next few years.

New America is a nonprofit, nonpartisan public policy institute based in Washington, DC, that invests in new thinkers and new ideas to address the next generation of challenges facing the United States and the global community. The Open Technology Institute (OTI) is a program within New America which promotes affordable, universal access to open and unrestricted communications networks through technology development, applied learning, and policy reform. OTI offers in-depth, objective research, analysis, and findings for policy decision-makers and the general public, develops technologies and tools to support universal and secure

¹ “Broadband Opportunity Council Notice and Request for Comments,” Federal Register Vol. 80, No. 82, Wednesday, April 29, 2015, available at <https://www.federalregister.gov/articles/2015/04/29/2015-09996/broadband-opportunity-council-notice-and-request-for-comment>.

communications, and works directly with communities to address communications and technological disparities.²

Promoting broadband deployment, access, and adoption through applied research and advocacy at both the federal and local level is a key goal that has underscored much of OTI's work. We served as partners and evaluators on several Broadband Technology Opportunities Program (BTOP) projects; have worked with the National Telecommunications and Information Administration (NTIA) and Federal Communications Commission (FCC) to promote better policies relating to broadband access and affordability for individuals and community anchor institutions; and have worked on the ground with local communities across the United States to increase broadband access and adoption and develop important digital literacy tools.

These comments focus on the need for a unified approach to improve broadband outcomes and outline a series of short-term and long-term steps that the Council and its member agencies can take to improve broadband deployment, access, and adoption in communities across the United States. Although the Internet was invented in the United States, in recent years we have fallen behind other countries in affordability and speed. As our annual "Cost of Connectivity" study notes, the majority of U.S. cities that we surveyed lag behind their international peers, paying more money for slower Internet access—a finding echoed in a number of other studies that compare broadband access in the United States to its peers around the world.³ The steps that we suggest below are designed to help reverse this trend and help ensure that affordable broadband access becomes a reality for all Americans.

While the 2010 National Broadband Plan ("Plan") was a landmark step in synthesizing broadband priorities, according to an analysis by the Benton Foundation, only about 20 percent of the Plan's goals have been completed, and most of those completed fall under the FCC's purview.⁴ There is therefore a critical need for a reboot at the federal level, and we are encouraged by the Administration's efforts in creating the Broadband Opportunity Council and spearheading this opportunity for comment.

II. Shared Vision for Promoting Broadband Deployment, Access, and Adoption in the 21st Century

To spur major shifts in broadband outcomes, the Administration must begin with a vision, shared across agencies, that recognizes the importance of broadband access, prioritizes investment in broadband resources, and examines broadband adoption under a flexible, inclusive lens. While specific initiatives and projects can help achieve increased access to broadband, a unified vision lays the groundwork for a common framework and understanding of the nuances and challenges related to broadband adoption. This will make it possible to clearly identify coherent and integrated goals going forward.

² For more about OTI's work, see <http://www.newamerica.org/oti/>.

³ Nick Russo et al., "The Cost of Connectivity 2014," *New America's Open Technology Institute*, October 2014, <https://www.newamerica.org/oti/the-cost-of-connectivity-2014/>.

⁴ "The National Broadband Plan at Five: The Work Done and Work Ahead," *The Benton Foundation*, March 17, 2015, <https://www.benton.org/blog/work-done-and-work-ahead>.

As the Council crafts this shared vision, we urge it to consider the necessity of broadband for all areas of life and the significant challenges that certain constituencies face in accessing it. We also ask the Council to think carefully about the distinctions between broadband *access* and broadband *adoption*, and to explore a definition of adoption that is not limited to the singular metric of home broadband subscriptions.

Today, broadband is a necessity for navigating virtually every aspect of our lives. We use the Internet to communicate with loved ones, find jobs, learn both inside and outside of the classroom, create and share content, and, importantly, to access critical government services and support. But in order to realize these benefits, that access must be affordable and provide sufficient capacity. As President Obama emphasized in his 2015 State of the Union address, high-speed Internet service is essential 21st century infrastructure.⁵ It is therefore critical that a shared vision prioritizes increased broadband investment and improved access through faster speeds and lower prices for consumers.

However, several key constituencies currently face significant barriers to broadband access—particularly low-income communities, communities of color, and the elderly.⁶ Recent studies suggest that more than 50 million Americans are not currently online, with cost, usability, and relevance cited as the most prominent factors preventing people from subscribing to home Internet service.⁷ A closer look at the demographics of the offline population point to some of the underlying challenges: half of all offline Americans live in rural areas (even though only 15 percent of the total American population lives in nonmetro areas),⁸ and four out of five Americans who are not online live below the poverty line. Competition among broadband providers is also a critical problem since most Americans live in areas where only a single provider offers high-speed connectivity, and the connections that they offer are often slow and expensive.⁹

We also remind the Council that broadband access is distinct from broadband adoption. Focusing exclusively on increasing broadband penetration rates, or simply lowering the price of

⁵ “President Obama’s State of the Union Address — Remarks As Prepared for Delivery,” January 20, 2015, available at <https://medium.com/@WhiteHouse/president-obamas-state-of-the-union-address-remarks-as-prepared-for-delivery-55f9825449b2>.

⁶ According to the latest research from Pew, important demographic factors in determining which Americans are not online include annual household income, level of education, race, age, and community type (rural/urban/suburban). Kathryn Zickuhr, “Who’s Not Online and Why,” *Pew Research Center*, September 25, 2013, <http://www.pewinternet.org/2013/09/25/whos-not-online-and-why/>.

⁷ In a 2014 McKinsey study on barriers to broadband adoption, 34 percent of respondents cited relevance as the primary factor for not using the Internet; 32 percent cited usability, 19 percent cited cost, and 7 percent cited lack of availability or access. “Offline and Falling Behind: Barriers to Internet Adoption,” *McKinsey & Company*, October 2014, p. 96-97 available at http://www.mckinsey.com/client_service/high_tech/latest_thinking. Also see Caitlin Dewey, “The Great Disconnect: A big chunk of the world’s offline population actually lives in the U.S.,” *The Washington Post*, October 1, 2014, <http://www.washingtonpost.com/news/the-intersect/wp/2014/10/01/the-great-disconnect-a-big-chunk-of-the-worlds-offline-population-actually-lives-in-the-u-s/>.

⁸ “Offline and Falling Behind” at p. 94; Tim Marema, “Half of Offline Americans Live in Rural,” *The Daily Yonder*, October 3, 2014, <http://www.dailyyonder.com/half-offline-americans-live-rural/2014/10/02/7557>.

⁹ “Competition Among U.S. Broadband Service Providers,” *Department of Commerce*, December 2014, <http://www.esa.doc.gov/sites/default/files/competition-among-us-broadband-service-providers.pdf>; Russo et al., “The Cost of Connectivity 2014.”

broadband through competitive or regulatory means, does not necessarily lead to improved broadband adoption. As OTI has noted in the past, “[m]any current solutions proposing to bridge the digital divide in the above cities and elsewhere in the United States have been based on a limited set of assumptions. Solutions focus on demographic predictors of low adoption, the mechanics of access (e.g., ‘if-we-build-it-they-will-come’ strategies), and models of economic and community development.”¹⁰ Policymakers tend to think of the ‘digital divide’ as strictly dichotomous—you either have access or you do not. However, this binary frame limits our understanding of the many variables that shape people’s relationships to and use of broadband access. How we define what broadband adoption means for particular communities will instruct how we improve it.

In particular, it is important to for the Council to consider ways to improve digital literacy tools for communities. Incredibly, 63 percent of offline Americans indicate that even if they had access, they lack the digital literacy skills required to use the Internet without assistance.¹¹ Prioritizing the development and implementation of digital literacy tools is therefore critical in ensuring that efforts to improve broadband access actually lead to meaningful broadband adoption.

Finally, community anchor institutions (CAIs) play a critical role in both providing physical access to the Internet as well as the social infrastructure needed to help bring people online. While traditional CAIs like schools and libraries play a substantial role, it is also important to look beyond them to other types of community anchor institutions that can help address broadband access and adoption challenges. BTOP broadly defined community anchor institutions to include not just schools and libraries but also “medical and healthcare providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, the unemployed and the aged.”¹² We encourage the Council to adopt a similar approach when thinking about community anchor institutions, and to encourage investment in digital literacy training and other social infrastructure at a local level to help bridge the digital divide.

III. Short Term Recommendations

In the short-term, there are several steps that the Council can help implement that will lay the foundation for future reforms. Inherent in these efforts is the need for effective data collection and resource assessment.

¹⁰ See Seeta Pena Gangadharan and Greta Byrum, “Defining and Measuring Meaningful Broadband Adoption,” *International Journal of Communication* 6 (2012), 2601-2608, available at <http://ijoc.org/index.php/ijoc/article/view/1836/812>.

¹¹ “Offline and Falling Behind” at 99.

¹² “Broadband Technology Opportunities Program — Glossary of Terms,” January 2010, available at http://www.ntia.doc.gov/legacy/broadbandgrants/guidance/Glossary_01-29-10_v6.pdf.

- a. *Conduct an agency-by-agency assessment to understand available resources for broadband infrastructure investment as well as for broadband adoption efforts*

Understanding where resources exist for broadband infrastructure investment and implementing broadband adoption efforts is a critical first step in improving broadband outcomes. While the FCC plays a clear role in supporting investments in broadband buildout and subsidies for service in schools and libraries, as well as subsidies for phone and broadband service for low-income households, a single agency cannot play the sole role in overcoming all barriers to access and adoption. We therefore urge the Council to conduct an agency-by-agency assessment of potential additional resources that are currently available for, or could be made available for, infrastructure investments and broadband adoption efforts.

- b. *Improve and synthesize data collection efforts across agencies to ensure robust analysis of broadband availability and role of various federal programs*

It is difficult to assess the overall state of the high-speed Internet access in the United States right now given the lack of comprehensive, granular data. In order to fulfill its mandate, the Council must have an in-depth understanding of what Internet service costs both consumers and community anchor institutions across the country. Although some of this data is collected by various parts of the federal government and independent agencies, there is no single, comprehensive database that maps broadband availability, advertised speed, actual speed, monthly price, and other important information.¹³ We urge the Council to come up with a unified plan for data collection on the state of broadband deployment, access, affordability, and adoption in the United States that provides clear standards and formats for all government agencies that have or collect relevant information. In addition to providing for greater openness and transparency, this data could be used by researchers and policymakers to better understand the root causes of the United States' broadband challenges and pinpoint specific, targeted areas for intervention. This data is also essential to document and study the long-term broadband subscription impacts of both local and federal digital inclusion and broadband adoption programs.

To guide the process, the Council should think about several related questions:

1. What information is the federal government currently collecting that could be improved?
2. What information is the federal government *not* currently asking for that it should be collecting?
3. What data should be described more specifically or structured differently in order to improve its usefulness to policymakers, researchers, and the public?
4. How can this data be collected across the various federal agencies in a manner that does not increase reporting burdens but rather streamlines and coordinates the process?

¹³ For example, the FCC collects some annual data from broadband providers through its Form 477 about speed tiers and other service offerings, as well as pricing data from schools and libraries that participate in the E-rate program; the National Broadband Map makes available self-reported data about residential and commercial service providers serving communities around the country; and the Commerce Department collects and publishes aggregate data about the state of broadband competition in the United States. But these data are not collected in a coordinated manner, nor are they always made available to researchers and the public in formats that allow for integration with other data sets for more in-depth study.

We further urge the Council to work with the various federal agencies to ensure that all broadband-related information is collected in a way that leads to machine-readable, structured data sets that can be integrated into a central repository. Researchers both inside and outside of the government should be able to analyze and compare these data sets over time, and they should be able to cross-reference them with other relevant federal databases without doing substantial work to refine the data for analysis. There are a number of existing resources that can inform how to structure and release this data, including the White House’s Open Data Policy and resources created through the broader Open Data Initiative, as well as the work of non-governmental organizations like the Sunlight Foundation.¹⁴

c. Adopt a standardized definition for broadband speed across all federal agencies

In January 2015, the FCC changed the definition for broadband that it uses to assess whether broadband is being deployed in a timely fashion throughout the country, adopting a new standard of 25 Mbps download speeds and 3 Mbps upload speeds (up from 4 Mbps download and 1 Mbps upload).¹⁵ The new benchmark more accurately reflects consumer needs and highlights the importance of ensuring that the hardest to reach areas of the country are not left behind. We encourage all federal agencies to adopt a similar definition for broadband speed, which not only reflects current market realities but will also encourage high-speed infrastructure investment and promote greater harmony across federal programs.

d. Conduct an inventory that maps all federally and publicly funded broadband networks

In addition to understanding what federal funding and infrastructure can be used as part of broadband access and adoption efforts, it is also important to know where federally- and publicly-funded networks and fiber optic capacity currently exists. A wide but not widely-known variety of public agencies and programs have deployed fiber optic capacity across the country, much of which could be leveraged to lower costs for both local commercial and public sector broadband deployment efforts. Mapping access is a valuable exercise in itself, and it can also lay the groundwork for smart policy interventions going forward. For example, as we recommend below, the Administration could encourage those networks to share extra capacity to the surrounding communities, or could encourage those networks to make capacity available under an open access framework. We therefore urge the Council to direct a comprehensive assessment of these public networks and fiber facilities, and make those findings available to policymakers, researchers, and the public.

¹⁴ “Open Data Policy—Managing Information as an Asset,” Executive Office of the President, Office of Management and Budget, May 9, 2013, <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf>; “Open Government Initiative,” The White House, <http://www.whitehouse.gov/open>; “Open Data Policy Guidelines,” *The Sunlight Foundation*, available at <http://sunlightfoundation.com/opendataguidelines/#open-formats>,

¹⁵ “FCC Finds Broadband Deployment Not Keeping Pace,” *Federal Communications Commission*, January 29, 2015, <https://www.fcc.gov/document/fcc-finds-us-broadband-deployment-not-keeping-pace>.

e. Put federal government support behind sensible policies that remove barriers to infrastructure deployment

Member agencies should promote smart, sensible policies that remove barriers to infrastructure deployment at all levels of government. For example, implementing local “dig once” policies — where additional telecommunications conduit infrastructure is installed in coordination with other construction projects — can help reduce the costs of future broadband construction projects. Every time a city or local government opens up a street, they should take advantage of the opportunity to lay down conduit for installing fiber. In June 2012, President Obama directed the Federal Highway Administration (FHWA) to review dig once policies, and the FHWA’s October 2013 report confirmed the effectiveness of these measures.¹⁶ A publicly-owned conduit system, open and available to all competitors, would reduce the burden of building new broadband lines to both residences and businesses.

In addition, member agencies should also consider implementing policies that would permit network operators—particularly operators of publicly-funded networks—to make excess capacity available to community users and anchor institutions. For example, in our recommendations to the FCC in its recent E-rate modernization proceeding, we urged the FCC to allow schools and libraries receiving E-rate support to have flexibility in determining how they use and share any extra capacity, particularly during non-school hours.¹⁷ Leveraging excess capacity could take many forms: for example, maintaining open wireless access points that can be used in the immediately-surrounding area of a public institution; or lending capacity to a wireless mesh network, as we have described previously.¹⁸

f. Create and appoint a single position to coordinate these initiatives across the various federal agencies

While we have already noted the importance of a shared inter-agency vision for broadband access and adoption, developing and implementing that vision and the resulting policy recommendations would be greatly aided by the creation of a new Administration position tasked specifically with overseeing and coordinating this work. This individual could report to the Chief Technology Officer, or could slot into any number of places within the Administration. The primary responsibilities of the position would be to lead the development a unified vision and approach and to coordinate broadband access and adoption efforts broadly across agencies.

¹⁶ Office of Transportation Policy Studies, “Minimizing Excavation Through Coordination,” Federal Highway Administration, October 2013, http://www.fhwa.dot.gov/policy/otps/policy_brief_dig_once.pdf

¹⁷ “Comments of New America Foundation’s Open Technology Institute and Education Policy Program in the E-rate Modernization Proceeding,” WC Docket No. 13-184, November 8, 2013, available at <http://www.newamerica.org/oti/reply-comments-on-e-rate-modernization/>.

¹⁸ Benjamin Lennett, Sarah J. Morris, and Greta Byrum, “Universities as Hubs for Next Generation Networks: A model for universities to spur 21st century Internet access and innovation in their communities,” *New America’s Open Technology Institute*, April 2012.

IV. Long Term Recommendations

In the longer term, we urge the Council to undertake more ambitious reforms that will promote broadband infrastructure investment and adoption that ultimately helps to bridge the digital divide.

a. Require open access provisions on all publicly-funded broadband networks

We recommend that all publicly-funded broadband networks should be required to maintain open access to their infrastructure. The benefits of open access policies — particularly local loop unbundling — have been well documented. Numerous studies have demonstrated that unbundling played an important role in facilitating competitive entry in a number of European and Asian countries over the past few decades.¹⁹ According to the Berkman Center for Internet and Society at Harvard University, there is “extensive evidence...that open access policies, where undertaken with serious regulatory engagement, contributed to broadband penetration, capacity, and affordability.”²⁰ *The Economist* has suggested unbundling policies could be a key driver of renewed competition in the United States.²¹

The Santa Monica City Net, a city-owned 10 Gbps fiber optic network that is open to competitive third parties, exemplifies the benefits of such policies. Although the city’s network serves local businesses exclusively, it has also benefitted residential consumers by allowing residential service providers to access its infrastructure, and has enabled the city to experiment with pilot projects to help connect underserved parts of the community.²²

Alternatively, the Administration could begin by implementing this recommendation for open access to federally-funded broadband networks, rather than all publicly-funded networks.

b. Ensure that whenever federal agencies implement programs or introduce new services that require broadband access and/or digital literacy skills, parallel plans are made to improve access or contribute to ongoing digital literacy efforts

When implementing innovative new services and programs, there is a risk that federal agencies may increase the digital divide by assuming a level of broadband access or digital

¹⁹ “Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy From Around the World,” The Berkman Center for Internet and Society, February 2010, http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Berkman_Center_Broadband_Final_Report_15Feb2010.pdf. See Table 4.2, which contains a review of 15 studies from government or international organizations, academic institutes or think tanks, and industry-sponsored groups on “unbundling and broadband penetration,” nine of which show a positive impact on penetration.

²⁰ “Next Generation Connectivity,” p. 82.

²¹ “A Tangled Web: America’s new Internet rules are mostly sensible—but the country’s real web problem is far more basic,” *The Economist*, December 29, 2010, <http://www.economist.com/node/17800141>; “The Web’s New Walls: How the threats to the internet’s openness can be averted,” *The Economist*, September 2, 2010, http://www.economist.com/node/16943579?story_id=16943579.

²² For more information, see <http://www.smgov.net/departments/isd/smcitynet.aspx>. Also see Eric Lampland and Christopher Mitchell, “Santa Monica City Net: An Incremental Approach to Building a Fiber Optic Network,” *Institute for Local Self-Reliance*, March 2014, <http://www.ilsr.org/wp-content/uploads/2014/03/santa-monica-city-net-fiber-2014-2.pdf>.

literacy that will in practice leave certain underserved segments of the population behind. In these situations, attempts to harness the power of the Internet to increase access to services and promote equity may unintentionally exacerbate existing divides. It is therefore critical that federal agencies deliberately plan for how they will improve broadband access or contribute to ongoing digital literacy efforts whenever they implement new solutions that rely on Internet service.

V. Conclusion

There is no single solution or “silver bullet” that can solve all of America’s broadband challenges, but we believe that the Broadband Opportunity Council has a tremendous opportunity to make real progress through a coordinated and unified approach to improving broadband deployment, access, and adoption. We appreciate the opportunity to submit these comments and look forward to engaging with the Council in the future on these important issues.

Respectfully submitted,

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