

**Testimony of
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**Before the
Committee on Energy and Commerce
Subcommittee on Communications and Technology
United States House of Representatives**

**Hearing Entitled
“Is the Broadband Stimulus Working?”**

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I. Introduction

Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee, I am pleased to be here to today to update the Subcommittee on the National Telecommunications and Information Administration’s (NTIA) work to expand access to and adoption of broadband in the United States. Four years after the American Recovery and Reinvestment Act, I can report that our efforts with the Broadband Technology Opportunities Program (BTOP) and State Broadband Initiative (SBI) are delivering substantial and meaningful benefits to thousands of communities in every state, the territories, and the District of Columbia.

The \$4 billion NTIA invested in roughly 230 projects to expand broadband access and adoption across the country, including leveraging over \$1.4 billion in non-Federal matching funds to enhance the sustainability of these investments, is helping to ensure that Americans have the resources and skills needed to benefit from the economic, educational, and civic opportunities the Internet makes possible. The projects range from large statewide infrastructure projects supporting the Internet-based economy of the future and jumpstarting economic development in areas hard hit by the recession, to high-impact small projects to upgrade library public computer centers in remote rural towns so residents can access state-of the-art skills training, to sustainable broadband adoption projects delivering comprehensive, personalized programs to reduce the number of Americans without broadband in the home.

**II. Success in Achieving Program Objectives
a. Exceeding Performance Goals**

Today, nearly two and a half years after NTIA met the Congressionally-mandated deadline to award all funds by September 30, 2010, I am pleased to report that recipients are delivering on their promises to create jobs, stimulate economic development, spur private-sector investment, and open up new opportunities in employment, education, and healthcare. NTIA’s broadband recipients are exceeding programmatic goals for deploying new fiber-optic infrastructure, constructing new public computer centers, and encouraging greater Internet adoption. Through December 31, 2012, they have:

- deployed or upgraded more than 86,000 miles of broadband infrastructure;
- connected almost 12,000 community anchor institutions to high-speed broadband Internet service;
- entered into more than 600 agreements with third-party providers to leverage or interconnect with their networks;
- installed more than 40,000 workstations in public computer centers benefitting approximately 20 percent of the country’s libraries;^[1]
- provided more than 9.9 million hours of technology training to approximately 2.8 million users;
- generated over 520,000 new broadband Internet subscribers; and
- funded approximately 4,000 jobs each quarter for the past five quarters and enabled the beneficiaries of digital literacy training to secure thousands more.

On every metric against which NTIA is measuring progress within the broadband programs, grantees exceeded their targets in 2012 and are well on their way to meeting or exceeding their 2013 targets as well.

In all, NTIA's broadband recipients have spent approximately \$2.8 billion in federal funds and approximately \$900 million more in matching funds in meeting these metrics. Notwithstanding project delays caused by environmental reviews, complex procurements and severe weather, program progress remains strong with over 70 percent of NTIA's Recovery Act funding expended.

b. Impacting Local Communities

The numbers only tell part of the story. Another important gauge of the success of NTIA's broadband programs can be found in the countless stories from individuals and communities of how the broadband projects are transforming their lives. A good example is Maine, where a combination of NTIA-funded broadband projects is making tremendous differences in broadband access, economic development, healthcare, education, and digital literacy.

The Three Ring Binder project – one of the first awards announced in December of 2009 – which is supported by the Maine state government, the state university system, and a group of small telecom carriers, used \$25.4 million in Recovery Act funds to build a 1,100-mile dark-fiber network across the state consisting of three interconnected fiber rings. Thirteen local carriers are now leasing that fiber to bring broadband to rural communities that, in many cases, previously had only dial-up service.

The Three Ring Binder project is also connecting community anchor institutions across the state. The University of Maine system will now be able to bring 10-gigabit connections to all seven university campuses to support big data-driven research and collaboration with other major academic institutions around the nation.

The project is also turning on a 10-gigabit connection to the Jackson Lab, a genetics lab, so that it can exchange extremely large gene sequencing datasets with a new facility in Farmington, Connecticut.

Axiom Technologies is using a \$1.4 million broadband adoption grant in very innovative ways in Washington County, Maine. It is transforming Down East Community Hospital – a 25-bed critical-care hospital in Machias, connected by the Three Ring Binder project – into a teaching facility for nursing students. The grant paid for video-conferencing equipment that allows nursing students to take necessary classes through a nursing college in Lewiston, nearly 200 miles away. The grant also paid for a state-of-the-art teaching mannequin used to train the nursing students in Machias that can be controlled by instructors in Lewiston. The first group of nurses will complete the program this May. Shelby Leighton, one of the first graduates, is grateful the program allowed her to pursue her dream of becoming a nurse without uprooting her family. Leighton is confident she will find a local job with her new specialized skills after she graduates so that she can – as she put it – care for the community that raised her.

Axiom is also equipping local lobstermen and blueberry farmers with rugged wireless devices, broadband connections, and broadband training to help them manage extensive state data collection and reporting requirements. Axiom is developing software to move these tasks out of old-fashioned paper-and-pencil logbooks and into the electronic realm. It is also teaching the farmers and fishermen – some of whom have never turned on a computer before – how to design websites, develop spreadsheets, and use programs such as Photoshop to advance their businesses. For example, Ellen Johnson, owner of an organic blueberry farm, took the training, and now has a brand new website to show off her blueberries, jams, and pies along with the website design and Photoshop skills to keep the site updated.

Axiom is offering digital literacy training in multiple locations around Washington County, including 18 public libraries. Many of those facilities have new computers thanks to a \$1.4 million public computer center award to the Maine State Library to distribute more than 500 desktops and laptops across 107 public libraries statewide and equip 11 with videoconferencing equipment. In NTIA's quarterly reports to Congress, we have highlighted dozens more success stories and have compiled even more on our website in the form of blogs, profiles, and recipient reports.^[2]

c. Jumpstarting Additional Private Investment through Open Access Policies

Our broadband grants are helping to “prime the pump” for additional investment by public and private entities. In particular, the open access and interconnection requirements imposed on federally-funded infrastructure are encouraging last-mile and other broadband providers to tap into these predominantly middle mile networks to expand broadband services and speeds for American consumers and businesses. Across the country, providers have signed over 600 agreements with our grantees to use federally-funded networks to better serve their customers.

The Three Ring Binder project is a good example of how this works. One of the 13 local carriers leasing fiber is Pioneer Broadband, which serves Aroostook County, a poor, rural county of potato fields and blueberry barrens where Interstate 95 literally comes to an end. Pioneer is leasing capacity on the Three Ring Binder network to bring DSL and even fiber-to-the-home to a string of remote towns that had no broadband whatsoever until now.

Ohio is another good example. NTIA was able to fund \$140 million in linked infrastructure projects to Ohio Middle Mile Consortium partners ComNet, Inc.; Horizon Telecom, Inc.; and OneCommunity. [3] In addition to constructing over 2,000 miles of new infrastructure and upgrading 1,700 miles more, these awardees have entered into 63 agreements with other service providers, further leveraging the investments and benefitting communities with an urgent need for improved broadband capabilities.

Combined, NTIA’s grant recipients are building more than 2,600 “points of presence” – or network nodes – in 1,500 communities. Over 80 percent of these communities will receive speeds greater than a gigabit per second, dramatically increasing the availability of truly high-speed broadband necessary for economic development, education, and research.

d. Empowering States and Collecting Broadband Data

In addition to its infrastructure, sustainable adoption, and public computer center grants, NTIA has become the leading source of public data on broadband access and adoption in America. SBI grants fund states to collect and verify broadband data in each state, territory, and the District of Columbia and to leverage knowledge of local needs to advance broadband technology and better compete in the digital economy. One example is in Utah, where a health information exchange company with approximately 200 employees lost both time and money at its rural call center facility due to frequent broadband outages. The company considered moving the rural jobs to a more urban location. However, working with the Utah Broadband Project, it used the Map to identify other broadband companies that could provide redundancy and were able to retain the rural jobs. A loss of 200 jobs in a small city with a population of 5,000 would have been significant. In Kansas, the Kansas Department of Commerce and Convergys Corp used the National Broadband Map to identify communities with the connectivity required for Convergys’s home-based hiring needs. Convergys has hired about 200 workers and plans to hire more, providing much-needed jobs in small towns.

NTIA has updated the National Broadband Map five times since its original February 2010 release. It is America’s first public, searchable nationwide map of broadband Internet availability, and it contains more than 20 million records collected from nearly 1,800 broadband providers. The map shows where broadband is available, the technology used to provide the service, the maximum advertised speeds, and the names of the service providers. It is the most extensive dataset of its kind, and it is being used by consumers and businesses comparison shopping for broadband service, economic development agencies enticing businesses to relocate, and policy makers determining where to focus funding. The next update is scheduled for this summer.

e. Promoting Digital Literacy

NTIA’s *Digital Nation* survey with the Census Bureau indicates that a third of households – more than 100 million Americans – do not subscribe to broadband Internet access at home. In addition, about one in five households – 20 percent – do not use the Internet from any location. [4] Although the U.S. has come a long way in broadband adoption over the past ten years, this data point is significant in light of the importance of broadband access to our citizens and our economy. Our survey results indicate that the reasons consumers give most often for not subscribing is that they do not need broadband or are not interested in it. Cost is the second most frequently given reason, followed by the lack of an adequate computer.

Digital literacy is fundamental to sustainable broadband adoption. Through our broadband programs, awardees are gathering a tremendous portfolio of innovative approaches that communities will be able to replicate for years to come. Both sustainable broadband adoption projects and public computer center projects are reaching people who may never have even turned on a computer – a group that includes a disproportionate number of lower income Americans, senior citizens, and members of minority groups – and teaching them how to navigate the Internet, set up an email account, write a resume, and even apply for jobs over the Internet.

A key learning is that we cannot solve the adoption gap by focusing on only one of the barriers. A successful program must address all the major barriers in a comprehensive fashion and be tailored to the specific needs of the community and the individual. Another key point is to take advantage of the opportunity to provide digital literacy training to also focus on workforce training, particularly in areas of higher unemployment. Many grantees have found a natural extension of the digital literacy training to also assist their communities to take advantage of the online environment to find jobs.

Digital literacy includes skills that many of us take for granted. But for those stuck on the wrong side of the digital divide, not having basic digital literacy can be a significant barrier to employment. Many job listings are only posted online these days and many employers only accept job applications online. Even further, today's job market demands a basic knowledge of computers, software, and the Internet. The California Emerging Technology Fund, through a \$14 million Recovery Act investment, has helped over 2,600 people find jobs by providing digital literacy training. Combined, the more than 9.9 million hours of technology training to approximately 2.8 million users through NTIA grantees is helping equip Americans for the skills necessary to compete in the 21st century.

In addition, NTIA, in collaboration with the Department of Education and other federal agencies, created www.DigitalLiteracy.gov [4] to provide librarians, teachers, workforce trainers, and others access to resources and tools to teach computer and online skills necessary for success in today's economy. We continue to assemble materials from grantees and other leaders in the field and have made these tools freely available to anyone, anywhere, anytime. The portal now contains more than 500 resources (e.g., videos, tutorials, and lesson plans) to help prepare more Americans for today's jobs.

III. Monitoring, Oversight, and Technical Assistance

Ensuring projects deliver their promised benefits and protecting taxpayer funds are of paramount importance to NTIA. NTIA proactively performs extensive and diligent oversight and provides technical assistance to recipients tailored to their needs. Such oversight involves a significant level of effort and requires hard decision-making at times when all else fails to protect taxpayer investments. We appreciate the bipartisan support shown by this Subcommittee to ensure we have the resources needed to do so.

a. Providing High-Quality Oversight and Customer Service

The technical assistance, oversight, and outreach activities that NTIA has conducted since the last time I testified before the subcommittee include the following:

- An additional 3,000 check-in and conference calls conducted with recipients to monitor progress in achieving outcomes (over 6,000 total to date). This is the primary means of identifying and proactively addressing project issues such as milestone deviations, cost overruns, local approval or equipment delivery delays, and management challenges;
- Continued site visits (NTIA has now visited projects representing a total of 94 percent of program funds);
- Webinars and drop-in calls for awardees to provide guidance and share lessons learned on a variety of topics, including sustainability planning, mobile technology in schools, regional interconnection among recipients, and providing services to veterans;
- Four new fact sheets on sale/lease restrictions, Indefeasible Rights-of-Use, fiber swaps, and clarifying match documentation;[5]

- Monthly recipient newsletters published and as-needed emails generated regarding training, lessons learned, project closeout and answers to frequently asked questions.

b. Acting Early to Address Issues that Arise

A primary goal of NTIA's rigorous outreach, oversight, and monitoring is to proactively identify issues as early in the process as possible and resolve them promptly. NTIA utilizes tools such as technical assistance, Performance Improvement Plans (PIPs), Corrective Action Plans (CAPs), Award Suspension, or Award Termination to highlight concerns, provide opportunities for recipients to get back on track, and protect taxpayer investments. We use these tools and technical assistance to get projects back on track as quickly as possible.

NTIA has suspended nine BTOP grant recipients for performance related issues at one point or another during the program.^[6] In four cases, totaling approximately \$229 million in grant funds, we were able to work with the recipients to get the projects back in shape and lift the suspensions after the grantees addressed our concerns. As a result, the projects are stronger, more successful, and more responsible stewards of taxpayer dollars due to our interventions. The North Florida Broadband Authority wireless infrastructure project offers a prime example of where NTIA's oversight and technical assistance successfully enabled a project to get back on track after encountering initial obstacles that hindered its performance. Our oversight efforts identified concerns regarding project management, vendor oversight, and ongoing sustainability. We froze distribution of federal funds to the project for a month beginning in September 2011, helped the awardee navigate through the Corrective Action Plan process, conducted several site visits, and provided extensive technical assistance to the grantee. NTIA lifted the project suspension about a month later, after the recipient implemented management and vendor changes. Now, about a year later, the North Florida Broadband Authority project is nearing completion and benefiting dozens of communities in rural North Florida.

Three broadband infrastructure projects are currently suspended for performance-related issues, representing \$158.9 million of taxpayer funds. NTIA staff is working closely with these recipients, and we are hopeful that they will get their projects back on track so NTIA can lift the suspensions and the communities they target can receive the benefits promised by the projects.

c. Acting Decisively to Protect Taxpayer Funds When Projects Fail

In many cases, recipients get their projects back on track. For two projects, however, NTIA's strong oversight led to termination of their awards with minimal expenditure of public funds. In each case, NTIA stepped in and took action quickly once it had identified concerns. Among the first actions NTIA takes in such circumstances is to prevent awardees from further drawing down federal funds until our concerns are adequately addressed.

In these two cases, NTIA took action to terminate grants to recipients that materially failed to comply with the terms and conditions of their awards. In the case of project termination, we maximize the amount of funds returned by taking actions such as carefully reviewing costs incurred, securing property and equipment related to the project, and seeking to repurpose or sell any equipment purchased with federal funds. The two terminated projects were awarded approximately \$139 million and have expended approximately \$11 million, representing less than 0.3 percent of the total grant dollars awarded under BTOP. While I am disappointed that these particular projects will not deliver their intended benefits to unserved and underserved areas, these experiences underscore the importance and value of NTIA's strong federal oversight and monitoring of its broadband projects, and highlight its commitment to working closely and proactively with all recipients to ensure the success of the program as a whole. In addition, seven other awards were voluntarily terminated by the grantee early in the program. Just one of these seven grantees drew down any federal dollars from its account, which amounted to approximately \$36,000, and the remaining approximately \$44 million in federal funds were returned to NTIA.

d. Collaborating with the Inspector General

NTIA has worked closely with the Department of Commerce's Office of Inspector General (OIG) since the broadband grant programs began. Our shared goal has been to prevent waste, fraud, and abuse of taxpayer dollars by implementing these programs in the most responsible and efficient manner possible. The OIG has issued several reports that have provided valuable input to strengthen our oversight, identify lessons learned

for the future, and ultimately demonstrate that we have managed our broadband programs with the highest degree of responsibility, efficiency, and vigor possible for a program of this size, scope, and speed of implementation.

e. Program Close-Out

As we approach the end of Fiscal Year 2013, NTIA is focused on ensuring that the broadband grants deliver on their promises on time. To date, four projects have completely closed out, meaning that the grantees have reconciled all project finances, submitted final reports, and the government has a full accounting of the property paid for with taxpayer funds. Approximately 30 more projects are in what we call the “closeout phase,” meaning that they are in the process of submitting their final grant paperwork. These projects will return over \$10 million in project savings.

Once projects close, the federal government maintains an interest in real and personal property acquired or improved using federal funds.^[7] Recipients and subrecipients of broadband grants hold all property acquired or improved, in whole or in part, with federal funds in trust for the public purposes for which the grant was made. This exists throughout the duration of the useful life of the property.^[8] During its useful life, awardees must obtain approval from the Department of Commerce prior to selling or leasing the federally-funded property or using the property for a different purpose than intended. These requirements ensure that the assets the recipients acquired for their broadband projects continue to deliver their promised benefits long after NTIA closes out the awards.

We expect the majority of remaining projects to be complete by the end of Fiscal Year 2013. Approximately 15 percent of the BTOP projects may require additional time to complete their work due to delays caused by weather, environmental and historic preservation approvals, permitting, the statutory creation of the First Responder Network Authority, and other factors. Despite these delays, NTIA is focused on moving these projects forward quickly to deliver the intended benefits to the nation.

f. Sharing Lessons Learned

Because BTOP is a one-time program, NTIA is committed to leveraging these investments to the maximum extent possible. One way we will do that is by sharing successful strategies across the grant portfolio on issues ranging from procuring fiber to streamlining the environmental review process. In September 2010, NTIA contracted with ASR Analytics, LLC (ASR) to conduct an evaluation of the program’s economic and social impacts. The study will assess the degree to which NTIA has met the Recovery Act goals by measuring the short- and long-term economic gains in the grant-funded communities. ASR has already submitted an Interim Report summarizing results of its analysis of public computer center and broadband adoption recipients, and will deliver its Final Report, including analysis of the broadband infrastructure projects, in 2014.^[9] The initial findings confirm that NTIA’s broadband investments have already begun to demonstrate a meaningful and positive impact in their communities by training at-risk populations with the skills essential for today’s economy.

Furthermore, the broadband adoption projects are identifying best practices to overcome hurdles in advancing broadband adoption in the United States. NTIA is finalizing a Sustainable Broadband Adoption Toolkit that will provide detailed guidance for replicating the success of these broadband adoption projects and utilizing the lessons learned. The Broadband Adoption Toolkit harvests the innovations of our sustainable broadband adoption projects. It lays out the steps for effective broadband adoption efforts and provides concrete, field-tested approaches to leaping the barriers to adoption – such as lack of skills, lack of understanding, and plain old fear. Many of our grantees contributed their detailed and specialized knowledge about what works on the ground, and we will include information that covers outreach, awareness-building, training, curriculum, and making broadband affordable to low-income Americans. The Toolkit contains a wealth of information on good project ideas, incentivizing target audiences, and avoiding common pitfalls. We are hopeful that the Toolkit will help communities throughout the United States develop tailored adoption programs to help more Americans harness the power of broadband technology to improve their lives.

IV. Conclusion

Four years after passage of the Recovery Act, the record is clear that the more than 220 BTOP projects and 56 SBI projects funded through NTIA's broadband programs are delivering economical, tangible, and extremely valuable benefits to communities and individuals nationwide.

Thank you.

[1] See American Library Association, First Report on "BTOP and U.S. Public Libraries" Shares Community Impacts, February 12, 2013, <http://www.ala.org/news/pr?id=12415> [5].

[2] NTIA Quarterly Reports to Congress are available on NTIA's website at <http://www2.ntia.doc.gov/BTOP-Reports> [6].

[3] More information about these projects is available at <http://www2.ntia.doc.gov/ohio> [7] and <http://www.ohiomiddlemile.org/index.html> [8].

[4] See Press Release, "New Commerce Department Report Shows Broadband Adoption Rises but Digital Divide Persists," available at <http://www.ntia.doc.gov/press-release/2011/new-commerce-department-report-shows-broadband-adoption-rises-digital-divide-pers> [9]. The full Digital Nation report entitled, "Exploring the Digital Nation - Computer and Internet Use at Home," is available at <http://www.esa.doc.gov/sites/default/files/reports/documents/exploringthedigitalnation-computerandinternetuseathome.pdf> [10].

[5] These fact sheets are available at <http://www2.ntia.doc.gov/ManagementResources> [11].

[6] This number does not include the seven public safety BTOP grants that were partially suspended May 2012 following enactment of the law creating the First Responder Network Authority (FirstNet). Passage of the Middle Class Tax Relief and Job Creation Act of 2012 last February created FirstNet to build, deploy, and operate a nationwide public safety broadband network. As a result, NTIA partially suspended seven BTOP 700 MHz public safety projects to avoid activities that might lead to added costs or stranded investments. Once appointed in August 2012, the FirstNet Board quickly engaged, spoke with the BTOP awardees and their vendors, and conducted site visits of each project. On February 12, 2013, the FirstNet Board adopted a resolution determining that the seven projects could provide substantial benefits to FirstNet. See <http://www.ntia.doc.gov/press-release/2013/firstnet-board-charts-path-forward-btop-public-safety-projects> [12]. NTIA will act expeditiously to lift the partial suspensions upon receiving notification that each awardee has reached agreement with FirstNet on the terms and conditions of its spectrum lease and each project details a reasonable path forward.

[7] See 15 C.F.R. §§ 14.30-37 and 24.31-34.

[8] More information on the useful life of property is available at http://www2.ntia.doc.gov/files/fact_sheet_useful_life_schedule_082510_v1.pdf [13].

[9] See Progress towards BTOP Goals: Interim Report on PCC and SBA Case Studies, available at <http://www.ntia.doc.gov/report/2012/progress-towards-btop-goals-interim-report-pcc-and-sba-case-studies> [14].