

Prepared Testimony of Connected Nation Chairman and CEO Brian R. Mefford
United States House of Representatives Committee on Energy and Commerce,
Subcommittee on Communications, Technology, and the Internet
“Oversight of the American Recovery and Reinvestment Act”
Thursday, April 2, 2009

Chairman Boucher, Ranking Member Stearns, and Members of the Committee – thank you for the invitation to discuss broadband within the context of the American Recovery and Reinvestment Act (ARRA).

When I had the honor of testifying before this committee nearly two years ago, our country’s broadband policy was in a very different place. Indeed, at that point we had very little in the way of national broadband policy. Today, thanks in large part to the thoughtful study and hard work of this committee, Congress has enacted the Broadband Data Improvement Act of 2008, with unanimous bipartisan support. Through this legislation, now Public Law 110-385, Congress has established a clear path for broadband expansion through state-based public private partnerships. And now through the American Recovery and Reinvestment Act, Congress has provided \$350 million for implementation of the Broadband Data Improvement Act, thus setting the course for the public and private sectors to work collaboratively for mapping the broadband gaps, filling the broadband gaps, and increasing broadband adoption and computer use – ultimately empowering our nation with more accessible education and

healthcare, a better skilled and more mobile workforce, more products to market, and enhanced economic opportunity and quality of life for all Americans.

Connected Nation is a non-profit organization that works with states, local communities, and technology providers to increase broadband adoption and digital literacy for all Americans – both urban and rural. For the last five years, Connected Nation has worked directly with states, local leaders, consumers, and broadband providers to build public-private partnerships to map the statewide gaps in broadband service; conduct local-level research on broadband and computer adoption and the barriers to technology use; develop grassroots technology planning teams in every county across a state for improved broadband adoption, and establish computer distribution and technology literacy programs for low-income and disenfranchised people. We work on behalf of American consumers, and we continue to find, time and again, in communities across our nation, that unserved and underserved people can and will overcome broadband challenges when the public and private sectors work together for meaningful change.

To that end, we applaud Congress for passage of the Broadband Data Improvement Act, and its full funding through the American Recovery and Reinvestment Act. This action establishes a clear spirit of collaboration between the public and private sectors. We recognize and appreciate that Section 106 of the Broadband Data Improvement Act was based on the Connected Nation

model for broadband expansion, and we would like to offer two suggestions that would help ensure the Broadband Data Improvement Act and all broadband stimulus funding is implemented in a manner that is effective, accountable, and achieves the ultimate goal of sustainable broadband access and adoption.

1) Effective broadband mapping must take place through a collaborative, public-private partnership approach.

The Broadband Data Improvement Act clearly sets forth a straightforward policy for broadband mapping. The law calls for mapping at a residential and business level, and it clearly states that the public and private sectors should work collaboratively to achieve all components of the program. Today at least nine states are already using this collaborative, public-private approach for household level broadband mapping. These states have achieved or will soon achieve a broadband map that identifies areas unserved by broadband, down to the street and individual household. In those states where a household level broadband map has been developed, applicants for the \$7.2 billion in stimulus funding for broadband infrastructure now have an instant tool for targeting projects in unserved areas. Additionally, once these infrastructure projects are funded and deployed through the ARRA, the broadband maps – which are continuously updated – will show exactly where and how broadband stimulus grants are being used to fill the broadband gaps.

Plenty of evidence exists to justify why Congress called for household level mapping in the Broadband Data Improvement Act. This household level is the only way to truly understand where the broadband gaps exist, particularly in rural areas. If broadband mapping is done at any higher level – at a geographic unit level such as Census units or postal codes such as nine-digit zip – the result will be a severe overestimation of broadband deployment across the United States.

For example, Connect Minnesota has found, through a detailed and granular method of broadband mapping at the household level, that broadband is available to 94% of Minnesota households. If Minnesota's broadband service availability were mapped at the level of census block groups, broadband deployment would be grossly overstated at 99.6%. Even at the most granular census block level, Minnesota would appear to have 96.4% broadband deployment – again, compared to Connect Minnesota's household level mapping which shows 94% availability. Even going down to the census block level, this type of general mapping would assume that nearly 45,000 Minnesota households are served when they are in fact unserved. Even worse, if Minnesota's broadband deployment were mapped in terms of nine-digit zip codes, the process would become substantially more laborious and complicated, and even less accurate, since zip codes at any level are postal codes and not geographic units.

The result of inaccurate and overstated broadband maps would be an inaccurate baseline for broadband deployment as well as inaccurate benchmarks when Congress tries to evaluate the progress and impact of the whole of the broadband stimulus funding. This does not lessen the importance of the FCC's new data collection methods by Census Tract through the reformed Form 477 process, which is a vast improvement over previous FCC data collection by zip codes. However, this type of data collection conducted by the FCC serves a very different purpose from the type of mapping Congress called for in the Broadband Data Improvement Act. FCC data collection by Census Tract (or any other potential geographic unit) is important for providing macro analyses to inform federal policy development. But it is impractical, unreasonable, and redundant to expect the FCC or any other federal agency to develop household level broadband maps without the support of public-private partnerships working on the ground with consumers and broadband providers to understand exactly where broadband is offered and where it is not. Oftentimes, broadband providers – particularly smaller ISPs and rural providers – do not even store data that indicate where they offer broadband service. Mapping projects through public-private partnerships work literally on the ground with these small providers to help them collect the data necessary for the broadband maps. These maps are continuously updated so that the maps immediately reflect deployments as they occur – thereby ensuring that local leaders have real-time information about unserved areas so that their efforts and resources are targeted effectively. Just as importantly, public-private partnerships provide daily custom mapping

analyses for state and community leaders, overlaying local level research such as broadband barriers and demographic data such as household density on a neighborhood-specific basis. Connected Nation maps vertical assets such as water tanks and cell towers, conducts topographic and propagation analyses, and provides engineering assessments at a local level. It goes without saying that all of this work is done at no additional cost to local leaders, and is included as part of the statewide efforts to help communities and broadband providers work together in the formation of business plans for sustainable broadband investment and deployment to unserved and underserved areas.

Therefore it is imperative that the NTIA implement broadband mapping in the manner that Congress has clearly set forth through the Broadband Data Improvement Act – by a method of household level mapping through state-based public-private partnerships. It is this local, on-the-ground approach to broadband mapping that is now being used by at least nine states and has produced maps of broadband availability and broadband speeds which are accurate, detailed, publicly accessible and transparent, verifiable, continuously updated, and perhaps most importantly, useful for filling the broadband gaps.

Critics of Connected Nation's stance on broadband mapping will say that maps developed through public-private partnerships are not verifiable or transparent. This is simply untrue, and anyone who goes online to view the interactive maps within these states who are engaging in this public-private mapping will plainly

see that broadband availability is made entirely transparent for consumers, with zoom and address search tools which allow consumers to search for an address and receive a list of broadband providers that serve a home or business.

Connected Nation employs and promotes a number of mechanisms to ensure its maps are accurate. In addition to extensive field tests, Connected Nation provides a number of communication tools with consumers through our website, interactive map, grassroots technology teams, and broadband telephone hotline to encourage consumers to let us know if they want broadband and can't get it, or to let us know if a map contains any inaccuracies. All inaccuracies are corrected immediately. The only data that are not disclosed are proprietary data such as the exact locations of infrastructure/equipment and the specific network footprint of individual providers. It is this information that Connected Nation translates and processes to develop a household level depiction of broadband availability, to illustrate the broadband gaps in availability and speed at a level so granular that it is verifiable by all consumers, and then to validate the data through an open, web-based, and publicly transparent broadband map.¹

¹ Connected Nation's maps can be viewed on the websites of Connected Nation's statewide programs, such as Connect Ohio at http://connectohio.org/mapping_and_research/interactive_map.php and Connected Tennessee at http://connectedtn.org/broadband_landscape/interactive_map.php.

2) The \$350 million provided in the ARRA for implementation of the Broadband Data Improvement Act is not just about mapping. Indeed, mapping is just one piece of the larger grant program within the Broadband Data Improvement Act. The bulk of the grant program empowers grassroots-driven broadband awareness and adoption programs. This grassroots component will help ensure that once the \$7.2 billion in ARRA funding for broadband infrastructure is spent, Americans in most need of broadband will directly benefit from it.

What we know is that broadband is available to more than 90% of Americans, yet only about 57% of Americans subscribe to broadband.² In areas where the recession has hit the hardest, broadband adoption is much lower, even in areas where broadband is already universally available. In Licking County, Ohio – which is part of Congressman Space’s district – more than 97% of residents have broadband service available; however, only 54% subscribe to broadband at home. In Decatur County, Tennessee, within Congresswoman Blackburn’s district – 72% of residents have broadband available, yet only 31% subscribe at home. And one of the more striking examples falls in Congressman Gordon’s district – Clay County, Tennessee, where 100% of residents have broadband available, but only 23% subscribe. These examples are not limited to Ohio and Tennessee. In communities across our country, Americans are not taking advantage of the benefits of broadband, even when it is available. This does not diminish the need for deploying broadband to areas that are unserved and

² Pew Internet and American Life Project, December 2008 survey of American residents.

underserved – the \$7.2 billion in stimulus funding for broadband deployment in the areas where it is needed is a critical and necessary piece to the ARRA broadband funding. However, the ultimate measure of success and accountability for the \$7.2 billion will come down to whether or not people use broadband once the pipes and towers are built.

The Pew Internet and American Life Project conducted a recent study asking those who don't use broadband why they don't use it.³ Pew found that 18% of those who haven't adopted broadband say it's a matter of price. Another 14% said broadband is not available where they live. Connected Nation's state and local surveys – which are conducted through a methodology that mirrors Pew's surveys – find similar results. This research reinforces the need for the \$7.2 billion in broadband infrastructure funding, and further reinforces the need for affordable broadband offerings. However, Pew also found that the top barrier to broadband adoption is not price or availability, but rather, a lack of demand for broadband services. More than half of those who have not adopted broadband say it's not relevant to them – they are not interested in broadband, too busy for broadband, and the like. Another 17% say broadband is too difficult to use or a waste of time. Connected Nation has been conducting similar surveys at the state and local level for the last five years, and the results are strikingly similar in both urban and rural areas – there is a dire need for broadband awareness,

³ Horrigan, John. Obama's Online Opportunities II: If you build it, will they log on? Pew Internet and American Life Project. January 2009.

education, and training. It is only when people actually use broadband that we start to see the real and long-term economic benefits.⁴

The \$350 million set aside in the ARRA for implementation of the Broadband Data Improvement Act, along with the additional \$250 million for demand stimulation programs and the \$200 million for strengthening public computing centers at libraries and community colleges, provide a clear vehicle for ensuring that the broadband infrastructure funding will bring about maximum, long-term economic stimulus. In particular, the grant program in the Broadband Data Improvement Act includes a series of requirements for state-based broadband expansion programs. These requirements boil down to five primary elements:

- 1) Broadband mapping at a household and business level;
 - 2) Local research in every county across a state to identify the specific barriers to broadband adoption in each community;
 - 3) Local technology planning teams in every county across a state, which will use the broadband maps and local research to develop tactical and community-specific business plans for technology expansion;
 - 4) Computer connectivity programs for low-income and underserved populations;
- and

⁴ Results of Connected Nation's most recent survey research can be found on Connected Tennessee's website at http://connectedtn.org/research/Tennessee_Technology_Trends_2008.php, and on Connect Ohio's website at http://connectohio.org/mapping_and_research/Technology_Assessment.php. Local survey research for each Tennessee county can be found at http://connectedtn.org/find_your_county/. Local survey research for each Ohio county can be found at http://connectohio.org/mapping_and_research/county_profiles/.

5) Thematic collaboration and cooperation between the public and private sectors across all program elements.

These five elements of the Broadband Data Improvement Act are very familiar to Connected Nation because they are the same five elements that make up the state-based public-private partnerships in Ohio, Tennessee, and Kentucky, and the dozens of other states that are working toward implementation of similar programs, based on the best practices for statewide broadband expansion which continue to develop in these three states. Ohio, Tennessee, and Kentucky have demonstrated – and continue to demonstrate – that all five programmatic elements of the Broadband Data Improvement Act are critical for success in mapping the broadband gaps, stimulating broadband demand, closing the digital gap, and ultimately increasing broadband adoption and economic prosperity.

In Tennessee, after 18 months of on-the-ground work by the Connected Tennessee public-private partnership for statewide broadband expansion, home broadband adoption in Tennessee has increased by 26% compared to an estimated 15% growth nationally. Computer ownership in Tennessee has more than doubled national growth – increasing by 7% compared to an estimated 3% national growth. Tennessee has now surpassed (by 10 percentage points) the national average of 74% of Americans who use the Internet from home or some other location. In Tennessee, 84% of residents use the Internet. Underserved populations in Tennessee have seen the largest increases in broadband

adoption and computer ownership, particularly among those demographics which have been targeted through the Connected Tennessee program. Broadband adoption among low-income minorities grew by 90% within the first year of Connected Tennessee's work.⁵

Public-private partnerships have proven themselves as the most effective vehicle for progressive change in broadband availability and adoption. There will be voices that choose to ignore the path that Congress has laid. These voices will push for public coercion of data and working against the private sector in this endeavor. However, when one looks past the self-interested pontificating and looks objectively at what really works to map broadband availability, fill the broadband gaps, and bridge the digital divide for Americans on Main Street – it is clear that a successful approach is a collaborative, cooperative model whereby the public and private sectors work together to bring broadband to all Americans. Congress has charted the course, and we are confident that the executive branch will steer the ship with this same spirit of collaboration between the public and private sectors.

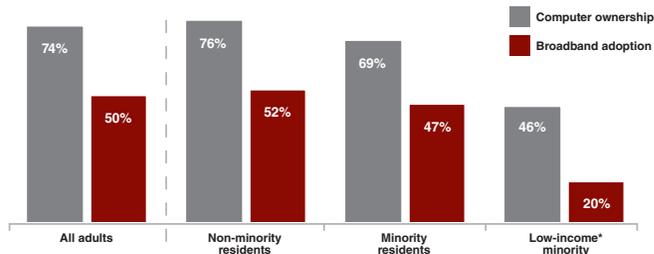
⁵ Connected Nation. The Call to Connect Minority Americans: A Connected Nation Policy Brief. March 27, 2009. http://connectednation.org/research/Minority_Americans_Policy_Brief.php. Also attached as an appendix to this document.

The Call to Connect Minority Americans: A Connected Nation Policy Brief

Recent studies show that American minorities continue to be among the nation's digitally disconnected. In surveys conducted across three states, computer ownership and broadband adoption among minority residents lag behind non-minorities.

- Only 69% of minorities own computers, compared to 76% of non-minorities. Among low-income minorities, computer ownership falls significantly lower at 46%.
- Only 47% of minorities subscribe to broadband at home, compared to 52% of non-minority residents. Home broadband adoption among low-income minorities falls to a staggering 20%.

Technology Adoption Among Minorities

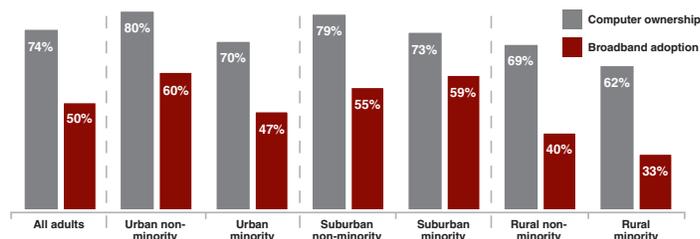


Q: Does your household have a computer? And
Q: Which of the following describe the type of Internet service you have at home?
n=3,005 TN, KY, and OH residents
*Annual household income less than \$25,000
Source: 2007-2008 Residential Technology Assessments of Tennessee, Kentucky, and Ohio

The technology gap for minorities is evident in both urban and rural areas. It is only in suburban areas that minorities maintain computer ownership and broadband adoption rates that are equal or better than average.

- In urban areas, where broadband is nearly ubiquitous, broadband adoption among minorities remains low at only 47%. By contrast, 60% of non-minorities subscribe to broadband in urban areas.
- In rural areas, broadband adoption among minorities still falls well below non-minorities. Only 33% of minorities subscribe to broadband compared to 40% of non-minorities.

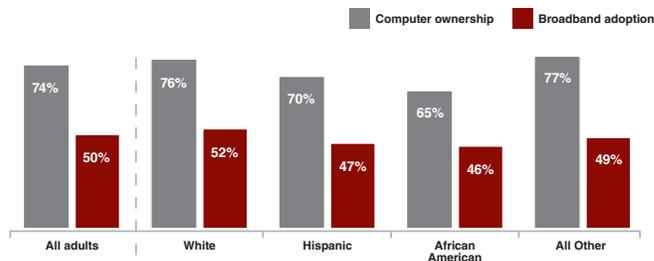
Technology Adoption Among Minorities in Urban and Rural Areas



Q: Does your household have a computer? And
Q: Which of the following describe the type of Internet service you have at home?
n=3,005 TN, KY, and OH residents
Source: 2007-2008 Residential Technology Assessments of Tennessee, Kentucky, and Ohio

The racial breakdown illustrates lower broadband adoption rates among all minorities, with Hispanics and African Americans posting significantly lower computer ownership rates.

Technology Adoption by Race



Q: Does your household have a computer? And
Q: Which of the following describe the type of Internet service you have at home?
n=3,005 TN, KY, and OH residents
Source: 2007-2008 Residential Technology Assessments of Tennessee, Kentucky, and Ohio

Statewide Public-Private Partnerships for Digital Inclusion

Among the broadband stimulus funds in the American Recovery and Reinvestment Act of 2009, Congress and the Obama administration have empowered states and communities to address the digital divide through funding the Broadband Data Improvement Act of 2008. This funding is available to states to develop and implement public-private partnerships for grassroots-driven expansion of broadband and computer use, particularly among low-adoption and underserved populations.

The Broadband Data Improvement Act (as funded in the stimulus act) provides states with a prime opportunity to address the connectivity challenges among minorities. The BDIA grant program provides funds to:

1. Develop street-level broadband availability maps,
2. Conduct detailed market research on the barriers to broadband adoption among various demographics,
3. Establish local technology planning teams in every county for increased broadband use,
4. Facilitate collaboration among the public and private sectors, and
5. Establish computer and Internet connectivity programs, particularly among low adopters and disenfranchised groups.

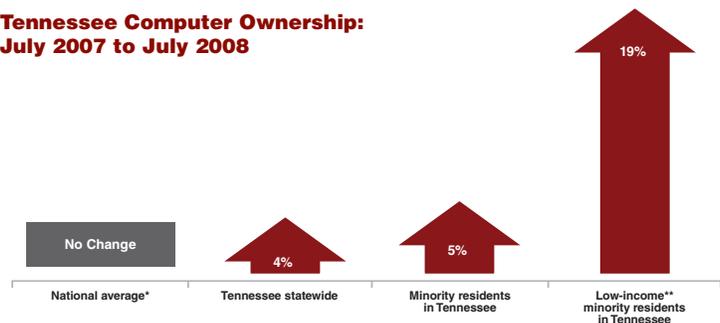
In order to be eligible for funding, states should designate an eligible entity to apply for the grant and operate the statewide program in each community across the state. This eligible entity may be a non-profit organization such as Connected Nation.

In states such as Kentucky, Ohio, and Tennessee, public-private partnerships are connecting the disconnected. Minorities are among those seeing the greatest impact.

After just one year of the Connected Tennessee program, statewide computer ownership increased by 4% compared to stagnant national growth. The increase in computer ownership among minorities was even higher at 5% (again, compared to 0% growth in the rest of the nation). Among low-income minorities, computer ownership increased by 19% in just one year.

Meanwhile, home broadband adoption in Tennessee has realized significant growth, particularly among minorities. Within the one year period, Tennessee's statewide broadband adoption grew two percentage points faster than the nation as a whole, with 18% broadband growth among minorities, and 90% broadband growth among low-income minorities.

Tennessee Computer Ownership: July 2007 to July 2008



Q: Does your household have a computer?

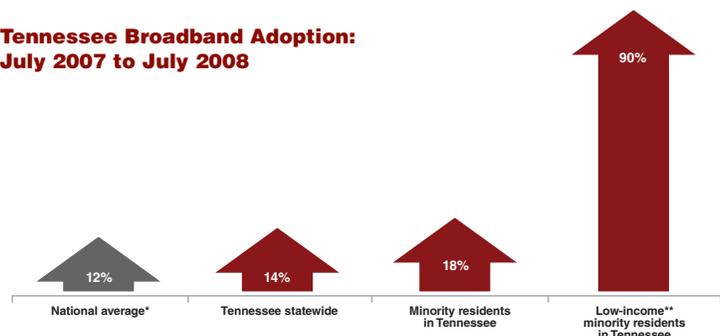
n=1,200 Tennessee residents

*National growth estimated using figures from the Pew Internet and American Life Project

**Annual household income less than \$25,000

Source: 2007-2008 Residential Technology Assessments of Tennessee, Kentucky, and Ohio

Tennessee Broadband Adoption: July 2007 to July 2008



Q: Does your household have a computer?

n=1,200 Tennessee residents

*National growth estimated using figures from the Pew Internet and American Life Project

**Annual household income less than \$25,000

Source: 2007-2008 Residential Technology Assessments of Tennessee, Kentucky, and Ohio