



Investing in Sustainable Broadband Adoption

Intel helps bridge the digital divide, working with non-profit and private entities to make a rich, full-featured computing experience affordable to Americans in unserved and underserved communities.



Boosting the U.S. Economy with Investments in Broadband Adoption

Governments around the world have increasingly recognized the powerful impact of broadband on the economic development of local communities and nations. The benefits of widespread broadband adoption include expanding economic opportunities and innovation, increasing trade and productivity, fostering investments and jobs, and enabling cost-effective delivery of critical social benefits such as education, health care, and government services.

The American Recovery and Reinvestment Act (ARRA), enacted in February 2009, provides USD 7.2 billion in stimulus funds to expand broadband deployment and adoption into unserved and underserved areas across the country.¹ The Department of Commerce's National Telecommunications and Information Administration (NTIA) will allocate USD 4.7 billion to support the deployment of broadband infrastructure, enhance broadband capacity at public computer centers, and encourage sustainable broadband adoption in unserved and underserved areas through its Broadband Technology Opportunities

Program (BTOP). The Broadband Initiatives Program (BIP), a program of the Department of Agriculture's Rural Utilities Service (RUS), is tasked with allocating the remaining USD 2.5 billion to support the deployment of broadband infrastructure in rural areas.

AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) BROADBAND FUNDING PROGRAMS

DEPARTMENT OF COMMERCE National Telecommunications and Information Administration (NTIA) Broadband Technology Opportunities Program (BTOP)

USD 4.7 Billion

Supports the deployment of broadband infrastructure, enhances broadband capacity at public computer centers, and encourages sustainable adoption of broadband services in unserved and underserved areas.

DEPARTMENT OF AGRICULTURE Rural Utilities Service (RUS) Broadband Infrastructure Program (BIP)

USD 2.5 Billion

Supports the deployment of broadband infrastructure in rural areas.

www.recovery.gov

“From broadband to microprocessors, we are connecting the world in ways that were unimaginable just a few years ago. Our challenge is not to just enjoy the benefits of the discoveries so far. Our obligation is to invest to take them further.”^Δ

—Paul Otellini
President and CEO, Intel Corporation



Intel has worked for many years with governments, community organizations, technology leaders, and service providers worldwide to develop sustainable, comprehensive approaches to accelerate PC ownership, promote information and communications technology (ICT), and enable access to the Internet for an incremental one billion people by 2012. Innovative Intel® technologies enable a robust Internet experience for users, helping to bridge the digital divide.

Broadband Challenges and ARRA Opportunities

While deployment of broadband networks has been the focus of many U.S. policymakers and academics, sustainable broadband adoption is actually the key challenge for the largest number of Americans. As Federal Communications Commission (FCC) Chairman Julius Genachowski stated in September 2009, “Broadband is available in...roughly 90 percent of the country. But adoption in the areas where broadband is available is closer to...50 percent, lower than that in low income areas. That’s a problem.”² Panelists at workshops held by the FCC in August 2009 agree. “Spurring broadband adoption may be an even bigger challenge [than network deployment],” panelists said.³

According to panelist Craig Moffett, an analyst at Sanford Bernstein, the number of people without access to a broadband network is actually much smaller than the number who

have access but don’t subscribe to it; adoption is a three to four times larger problem.⁴

Specifically, although broadband networks are available to more than 96 percent of American households,^{5,6} the Pew Research Center Internet and American Life Project reports that only 63 percent of households within a broadband network coverage area have opted to subscribe to broadband service—meaning that approximately 30 percent of households with broadband network availability have opted not to subscribe.⁷ Data from Connected Nation, Inc. shows that this non-adoption gap is even greater in rural communities such as Clay County, Tennessee, where only 23 percent of households have opted to subscribe to broadband service, despite network availability to 100 percent of households.⁸

The Pew Research Center identifies several obstacles to the adoption of broadband—especially in rural, aging, and economic challenged populations. The primary barriers are lack of relevance and awareness of broadband benefits, as well as the cost of acquiring broadband equipment and service.⁹ Indeed, owning a computer is “the biggest driver of broadband adoption,” according to Dallas Clement, chief strategy and product officer at Cox Communications, Inc.¹⁰ But many people can’t afford computers, or are afraid of the technology, agrees Verizon Vice President Anthony DiMaso.¹¹

Thus, in order to reach our nation's broadband goals, we must increase awareness of the benefits of broadband and the availability of affordable computers and broadband services. We must solve the critical broadband adoption gap, especially among low-income and other vulnerable households. With a staggering percentage of the U.S. population in this non-adoption category, opportunities abound to improve our national broadband penetration through targeted adoption programs.

Making Broadband Affordable through Public-Private Collaboration

Intel provides technologies that help deliver a rich Internet user experience. We are collaborating on a proposal with members of the non-profit sector and the ICT industry to utilize BTOP Sustainable Broadband Adoption funding for a PC-broadband bundle program that will reduce the key barriers to sustainable broadband adoption in low-income and other vulnerable communities. If NTIA approves our proposed program, it will increase awareness of broadband benefits through digital literacy and make PC ownership and home broadband service more affordable—enabling many more households in unserved and underserved areas to connect to the Internet.

Intel's work with non-profits and technology vendors helps to meet this challenge by providing a rich, full-featured, and affordable computing experience to economically challenged and

vulnerable households. Delivering Intel's newest generation of processors with industry-leading performance and energy efficiency will allow more citizens to:

- Become full participants in the growing digital economy.
- Take advantage of the growing range of online services including government, education, health care, and e-Commerce.
- Experience more productive professional lives.
- Enjoy increasingly rich media applications for music and video.

Delivering a Bundled Solution

If NTIA approves our proposed broadband stimulus program, first-time computer owners will benefit from a unique PC and broadband service bundle—the result of an ambitious public-private collaboration to help consumers overcome three leading barriers to broadband adoption: broadband awareness and training, computer ownership, and service affordability.

Working with local community organizations, the program will provide digital literacy education and help unconnected consumers purchase a new full-featured, broadband-enabled computer using an instant rebate, bundled with discounted broadband service for a minimum of 12 months.

Unlike other discount equipment offers that tie the discount to a one- or two-year minimum service contract, the PC-broadband bundle program would provide a true rebate and real consumer choice,



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CASE STUDY

In 2007, the State of Tennessee partnered with Connected Nation to create Connected Tennessee, a statewide program to expand broadband adoption. In the first 18 months of the program, Tennessee's growth in broadband adoption and computer usage has outpaced the national average—with broadband adoption increasing by 26 percent compared to an estimated 15 percent nationally. Over the same 18 month period, computer ownership in Tennessee increased by 7 percent—more than double the national growth rate, estimated at 3 percent. Underserved populations, particularly among demographics targeted through the program, have seen the largest increase in broadband adoption and computer ownership: Broadband adoption among low-income minorities nearly doubled in the program's first year.[^]

[^] Connected Tennessee letter submitted April 13, 2009 in response to the March 12, 2009 NTIA, RUS and FCC Request for Information as part of the Broadband Stimulus roll-out. www.ntia.doc.gov/broadbandgrants/comments/7DC9.pdf



allowing first-time PC owners to choose from a range of full-featured notebooks and desktops, all of which provide the rich experience necessary to truly bridge the digital divide.

The program creates a compelling value proposition for first-time residential broadband users by reducing the cost of both elements of a connected PC: the upfront equipment cost and the initial subscription cost for broadband service.

Conclusion

Private industry and the federal government must do more to address the issues associated with low broadband adoption in communities across America. Broadband adoption is essential

for full participation in the growing global information economy. It enables economic growth, creates new jobs, fosters innovation, and enables nations to compete more effectively.

Through public-private collaboration, we must make broadband adoption affordable to everyone. To reap the social and economic benefits associated with broadband adoption, we must support effective broadband awareness and enable every citizen to own the equipment and have the connectivity to thrive in today's information society.

Intel is helping connect the next billion users to the global economy through our commitment to ongoing innovation and developments that are driving next-generation broadband communications. Our goal is to be part of the solution in enabling sustainable broadband adoption for the U.S. and the world.

To learn more about the Intel Communications and Broadband Policy, visit www.intel.com/policy/communicationsbroadband.htm.

FURTHER INFORMATION

Find more information on sustainable broadband adoption programs at:

Connected Nation, Inc.
www.connectednation.org

Connected Nation's PC-Broadband Bundle Program (Every Citizen Online*)
www.connectednation.org/community_programs/Every_Citizen_Online_Q_And_A.php

Intel Communications and Broadband Policy
www.intel.com/policy/communicationsbroadband.htm

Intel Invention, Innovation, and Investment
www.intel.com/innovations/economy

Intel World Ahead Program
www.intel.com/intel/worldahead

WiMAX* Technology
www.intel.com/go/wimax

American Recovery and Reinvestment Act
www.recovery.gov

To contact Intel and find out more about the solutions covered in this brief, visit <http://ipip.intel.com/go> and fill out the Contact Us form.

¹ www.itif.org/files/roadtorecovery.pdf

² Howard Buskirk, "Blogband Comments to Be Made Part of FCC Record on Broadband Plan," Communications Daily, Sept. 11, 2009 (quoting Chairman Julius Genachowski speaking before the FCC's Consumer Advisory Committee).

³ Bender, Adam, "Bad Business Case Keeping Broadband Out of Rural Areas," Communications Daily, August 13, 2009.

⁴ Ibid.

⁵ Service providers must deploy network infrastructure to the relatively small segment (less than 10 percent) of the U.S. population to whom broadband service is not available. Cost-effective wireless technologies such as WiMAX* could offer a viable solution.

⁶ FCC Open Meeting, Broadband Initiative Task Force, Sept. 29, 2009.

⁷ Home Broadband Adoption 2009, Pew Research Center Publications, June 2009, <http://pewresearch.org/pubs/1254/home-broadband-adoption-2009>. At its open meeting on Sept. 29, 2009, the FCC Broadband Initiative Task Force reported that 33% of US households have access to broadband, but have not adopted it.

⁸ Connected Tennessee letter submitted April 13, 2009 in response to the March 12, 2009 NTIA, RUS and FCC Request for Information as part of the Broadband Stimulus roll-out. www.ntia.doc.gov/broadbandgrants/comments/7DC9.pdf

⁹ Pew Internet and American Life Project, "Stimulating Broadband: If Obama Builds It, Will They Log on?," January 2009, <http://pewresearch.org/pubs/1085/stimulating-broadband>

¹⁰ Bender

¹¹ Bender

¹² "The Long Look Ahead: The Economic Crisis and the Importance of Investing." Address to the Economic Club of Washington, D.C. www.intel.com/innovations/economy/docs/Paul_Otellini_DC_Economic_Club_Speech_02102009.pdf

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