

JULY 2009

# Broadband Stimulus:

## An opportunity to rethink infrastructure

July 9, 2009 | The federal government is setting aside \$7.2 billion to increase access to broadband communications across the nation, but this money alone will not conquer the Digital Divide for all Americans. Service providers that are deploying or expanding broadband networks should pursue these grants while concurrently rethinking their approach to building and operating networks. Re-engineering the traditional approaches to infrastructure ownership and network operations will enable service providers to cost-effectively build more networks in lower-density geographies. These novel approaches will also help participants lower their cost basis, which will enable them to deliver broadband services at a price that allows more Americans to participate in the digital age.

### Background

No matter whose statistics are used, the United States falls short in offering high-speed Internet access to its citizens. The International Telecommunications Union, which is the United Nation's agency for international telecom and information technology issues, ranks the United States 21st in its composite broadband benchmarking index — right behind Estonia. About 63% of Americans enjoy broadband access in their homes, and the gap between the digital haves and have-nots separates urban and rural, rich and poor. Jim Kohlenberger, chief of staff in the White House Office of Science and Technology Policy, has noted: "Broadband is the critical infrastructure challenge for our generation."

As such, the Obama Administration included \$7.2 billion in funding to improve the nation's broadband rollouts under the American Recovery and Reinvestment Act's Broadband Initiative, which is part of a wide-ranging \$787 billion stimulus package designed to kick-start the U.S. economy. The legislation sets a number of requirements for grant recipients, but many of the details remain vague. Some stipulations are that each state must receive at least one grant; that the federal contribution to the project cannot exceed 80%; and that the project not only increases broadband coverage in the area but that also increases affordability and subscribership for people living in the region. Further, all projects must be completed within two years after the grant is awarded, and grant recipients have to be able to show that the project would not have been funded within the timeframe without federal assistance.

### The Stimulus Package: Where it Stands Today

The National Telecommunications and Information Administration (NTIA), a unit of the Department of Commerce, is in charge of \$4.7 billion in funding, and the Rural Utilities Services (RUS), a division of the Department of Agriculture, will administer another \$2.5 billion in grant funds. Both government agencies are in the process of a series of town-hall meetings to hear suggestions on how to design and implement these programs.

### Mobilitie \ mō-bil-i-tee\ verb

**1:** the quality of being mobile **2:** the fastest growing tower company in the United States **3:** 50% revenue share and no equipment limits **4:** \$500 million on hand to invest in towers, DAS, and broadband backhaul networks For more information, visit [www.mobilitie.com](http://www.mobilitie.com)

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**Bud Noel**  
Vice President

Prior to joining Mobilitie, Bud served as Vice President of National Site Development for Sprint Nextel Communications. In this role, Bud was responsible for defining and implementing enterprise site deployment and operational strategies across a multibillion-dollar portfolio of assets. Earlier in his career at Nextel, he served as Vice President of Site Development for the Northeast Region, Director of Radio Services for New England and held various field engineering and network operations roles. Throughout his tenure, he oversaw numerous large-scale buildout initiatives and gained deep experience in all facets of the deployment cycle and network operations. He holds a Bachelor of Science in Engineering from East Carolina University and a Business Leadership Certificate from Georgetown University's McDonough School of Business.

RUS will administer its funds under an existing program designed to bring broadband telephony to rural markets, but will be working with NTIA and the Federal Communications Commission to align its grant programs. RUS funding will give particular priority to systems that introduce competition in monopolistic marketplaces.

Notices of funding availability (NOFA) are expected to be released soon, Kohlenberger told participants in a May Broadband Stimulus National Town Hall Meeting Webcast. Among other things, the NOFA will open the window for grant applications and set the applicable definitions, including the terms “broadband,” “unserved,” and “underserved,” according to an NTIA report to Congress. NTIA grant applications can be submitted through September, according to the agency, and initial awards are expected to be granted in the fourth quarter this year. Two more funding rounds will follow and all funds must be distributed by September 2010.

The role of the states and municipalities in this broadband initiative has yet to be determined. Some parties are concerned that state and local involvement will only dilute this initiative and politics will usurp sound broadband policy. There is also concern that solutions engineered at the local or state level will likely preclude the economies of scale required to deliver the broadband service at compelling price points and further exacerbate the issue of technology protocol convergence, which has hampered the evolution of legacy wireless network for many years. Conversely, state and local leaders have stated they are more knowledgeable about what is needed in their respective areas and they are in the best position to determine broadband policy for their states. Service providers have already taken actions to limit state government’s involvement and have pushed for legislation to limit government involvement in offering broadband services. Although these efforts have been based upon Wi-Fi services, the premise is the same. Bills to limit government participation in offering broadband services have been introduced in North Carolina and Pennsylvania this year. Finding the right balance amongst service providers, municipalities, states and the federal government will ultimately determine the success of the broadband stimulus initiative and will require much collaborative dialogue between all constituents.

### Finding the Competitive Advantage

With more than \$7 billion available, municipalities, service providers and rural telephone companies are clamoring to get a piece of the funding. Applicants will have to meet a number of stipulations to receive the available grants and loans. To date, the agencies have said they are looking for:

- Sustainable business models;
- Recipients that are able to contribute at least 20% of private funds to the buildout;
- Recipients that are not able to complete the project within the timeframe without government funding;
- And partnerships between “small businesses, municipalities, and others that may demonstrate nontraditional but effective ways of getting broadband into communities.”

Advanced wireless solutions may be able to fulfill many of the requirements of the broadband stimulus package for a number of reasons. Wireless technology is quickly approaching the high speeds that once were only available via fiber or DSL, and in many instances wireless telephony can be cheaper to deploy than fiber or copper coaxial cable, especially in remote locations, which the RUS funds are targeting. (In order to qualify for RUS funds, at least 75% of the geographic region must be rural and not have adequate high-speed access.) Further, the byproduct of these wireless broadband networks will be robust microwave networks used to support the high bandwidth backhaul requirements of these technologies. These microwave networks will further support RUS objectives by obviating the need and expense of deploying fiber optics to many of these rural communities. These microwave networks will have many tangential benefits and will further facilitate the broadband applications envisioned by the program, including streaming-video applications that would enable distance learning, and reliable high-speed access that would enable people in remote locations to compete with offshore workers for U.S. jobs.

NTIA and RUS have also stated the agencies are looking for partnerships and innovation. As such, it is expected nontraditional wireless technologies, like base stations that use software-defined radios, may be favored by the agencies as they distribute funds. Although this technology is new, the real benefit is that it reduces the cost basis for the carriers and allows them to offer

### NTIA Funding

**While the majority of NTIA's \$4.7 billion will be used for grants and loans, some money has been set aside for specific programs. In particular:**

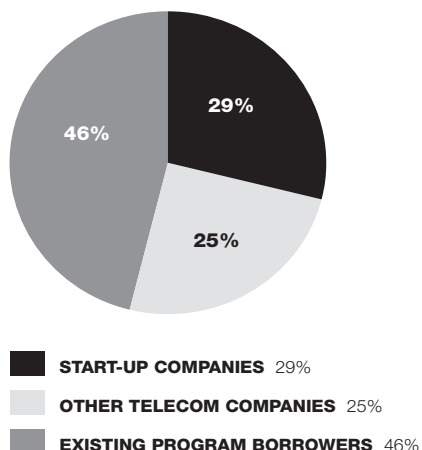
\$250 Million for programs that encourage sustainable adoption of broadband services

\$200 Million for expanding public computer center capacity, including at community college and public libraries

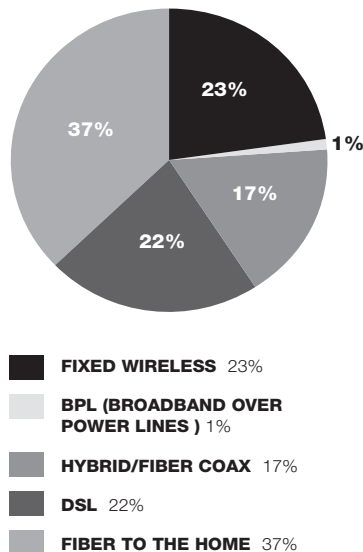
\$350 Million to develop and maintain a broadband inventory map

\$10 Million for the Inspector General to oversee the grant funds

### Types of Business Models



### Technologies Approved



Source: USDA

As the Rural Development Broadband Program, already in existence, is “technology neutral,” a variety of technologies have been deployed by its borrowers. In addition, USDA Rural Development makes loans to diverse organizations.

services to their customers at more affordable rates. The government is probably not going to use the broadband stimulus funds to promote unproven technologies, but technologies that can propel the United States to the next generation of broadband services would fulfill several goals of the Administration.

### A New Business Model

Sharing infrastructure historically has not been a core business practice employed by the telecommunications industry in the United States, which is why cable operators, wireline telephone companies and wireless carriers each have their own networks. However, wireless carriers have been far more receptive to the idea of sharing infrastructure recently; the most tangible example is their practice of collocating cell-site towers to reduce their collective costs. That mindset – that sharing some infrastructure is a sound financial approach – can help ensure successful future broadband deployments – regardless of whether they are partially funded by the government. This mindset is gaining real momentum as carriers tackle the problems of commoditization of services while concurrently seeking to upgrade their networks. We are now seeing service providers implement shared solutions that once would have been considered taboo, such as software defined radios, third-party managed services, tower dispositions and microwave networks.

Using a business model like that offered by Mobilitie, whereby the anchor tenancy receives a portion of the collocation revenue once the infrastructure is shared, further encourages the “shared” mindset by providing meaning financial benefits to all parties. Whether this infrastructure sharing is for fiber networks, microwave networks or towers, Mobilitie’s business model can facilitate the goals of the broadband stimulus program by helping service providers reduce their costs basis and deliver broadband access to more people at a cheaper cost.

### Summary

Federal funding will help the United States strengthen its efforts to bridge the Digital Divide, but these government monies will not build out an entire network, nor will they necessarily become available anytime soon, nor are there any guaranteed winners. Competition for these funds is heavy. Companies that believe they have viable business plans to offer broadband services in the United States should move forward with those plans, rather than wait for “free” money from the government. Mobilitie’s business model – offering upfront funding and the potential to earn revenue from shared infrastructure – will help service providers build more broadband infrastructure at a fraction of the cost.