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## Bringing broadband access to all: the IOC opportunity

*Stimulus money will help to fill in the service gaps for remote communities*

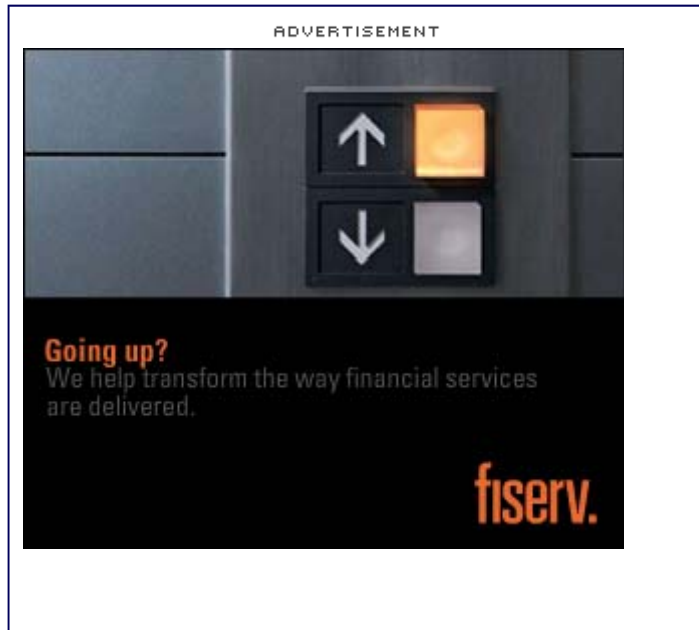
by Dan Kelly, Executive Vice President, Global Products, Tellabs

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An opportunity to enhance revenues and become their customers' hero beckons rural telecom operators contemplating federal broadband stimulus programs. Telecom companies now have a chance to build out a decade's worth of infrastructure over the next few years. The \$7.2 billion available for grants and loans to provide broadband to unserved and underserved consumers amounts to a once-in-a-generation jackpot for independent operating companies ready to seize it.

To conceive the program's magnitude, consider the Rural Utilities Service (RUS) within the federal Department of Agriculture, which seeks to distribute \$2.5 billion in broadband stimulus by the end of September 2010. Over the past nine years, the RUS has offered \$1.35 billion in loans, primarily to independent operating companies (IOCs), to expand communications service in rural areas, according to a report from the General Accounting Office.

"They will do twice that much in the next 18 months," said Vince Vittore, principal analyst-enabling technologies for Yankee Group. "This is a big pile of money – a huge increase from the past – clearly targeted at IOCs."



### Vital connections

The money, which Congress mandates must be spent quickly to provide jobs and counter the economic recession, can underwrite service expansion that many carriers crave. While satellite broadband service reaches most locales, concerns about high monthly rates and service quality cause many residents in outlying areas to long for terrestrial-based service comparable to what their city cousins enjoy.

Downloading electronic forms to comply with government regulations and searching the Internet for needed parts when farm equipment breaks down are just a few vital services broadband connections deliver, according to Cole Sims, a grain farmer based outside of Mer Rouge, Louisiana.

"I might drive 50 or 100 miles looking for parts and equipment that I can locate with a few keystrokes on the Internet," said Sims, who serves as a spokesman for the Rural Telecommunications Alliance.

When Sims is at his office in Mer Rouge, he has broadband, but when he works on his farm he doesn't. Even using his mobile phone for a voice call can be difficult.

"I'm a volunteer fireman. Dependable communications isn't just a convenience, it's a public safety issue out

here," he said.

Only in the past two years did customers in the town of Mer Rouge, with a population around 600, get DSL broadband, Sims said, and within the last year a new cell tower in the community has improved wireless reliability. He hopes that federal subsidies will extend service further.

"Providing access to rural customers is itself a stimulus to our local economy," he said. "We who live out here in what city people call 'the sticks' want to be part of this technology. All we need is a little help."

## **Closing the availability gap**

Carriers serving rural America are familiar with government programs through the RUS program, the universal service funding and other sources that help them upgrade communications service. Well before the current stimulus package was enacted, IOCs brought broadband to remote villages and hamlets.

Sierra Telephone, which serves parts of Central California's Madera and Mariposa counties, is in the process of installing a 10 Gigabit Ethernet ring and hopes to move all data customers to its new network by the end of this year. It can do so in part because equipment manufacturers offer solutions that enable carriers to upgrade networks without having to rip out and replace existing facilities.

"Sierra Telephone can now support a much faster and more flexible network while putting to bed challenges over migrating to a next-generation network, all on one platform," said Jeff Busto, Sierra's central office network manager.

In rural communities such as those served in upstate New York by Ontario & Trumansburg Telephone and in Kansas by Blue Valley Tele-Communications, residential customers enjoy watching video supplied over optical fiber using Gigabit Passive Optical Networking (GPON). The technology is as advanced as anything consumers can get in many big cities.

Even in communities where IOCs have installed state-of-the-art technology, there often are some customers who live too far away from the central office to enjoy the high-speed network. That is true for TDS Telecommunications Corp., a company that focuses on serving rural communities. TDS has morphed from a traditional provider of voice telecommunications to an advanced broadband services provider, said Andrew Petersen, a TDS spokesman.

The company operates in 130 markets spread across 29 states and in those markets its broadband service is available to most customers – 85 to 90 percent is the norm. In every market there are pockets of people who remain unserved, unable to receive by broadband.

"We look at the stimulus as an opportunity to finish the job," said Petersen. "We want to build out the service to remote customers where costs are very high. The average community we serve has a population of about 6,000. But every day that population doubles in size as rural people come in to work. That's an interesting phenomenon every day."

Communities seeking to attract businesses have come to regard broadband access to be just as necessary to that effort as good schools, access to quality health care and local banking, he said.

People who have access to broadband when they go to town begin to crave it when they are at home as well, said Petersen. "It's an addictive product. When you build it, they will come. We're looking to use RUS money to bring fiber from the central office out to our digital serving area boxes that service neighborhoods and subdivisions that are pretty remote."

Customers want to use broadband at home to take community college courses, view medical records and for entertainment, he said. TDS embraces and promotes broadband access as its core product, and wants to provide that core service to virtually all customers.

“People do a lot of things now beyond just talking to each other and checking e-mail,” said Petersen. “They want distance learning, robust Internet search capabilities and the ability to watch video without latency. You have all these telecom companies moving into video and cable companies going into telecom. Our view is that if you can deliver broadband service that is robust enough, you may not have a need for traditional cable TV.”

As a long-term participant in previous RUS programs, TDS is optimistic that RUS money could help it expand rural broadband service. It will also investigate funding from the National Telecommunications and Information Administration (NTIA), a unit of the Commerce Department that will distribute \$4.7 billion, to determine what opportunities might exist there, Petersen said.

## **A competitive process**

Competition for broadband stimulus money will be intense. And it's complicated by the speed with which the Obama administration wants to distribute this money. To apply in the first round this summer, IOCs had to start preparing applications before the federal agencies had concluded rule-making. Two more rounds will follow.

From the start, some aspects of the stimulus have been clear. It will focus on creating jobs quickly and helping rural Americans get access to high-speed networks. The RUS and NTIA will work together to administer fund dispersal. Because speed is essential and the agencies have limited ability to process applications, it makes sense for IOCs to submit large joint applications rather than smaller individual ones. In this program, the government would rather write a large check than several small ones.

The stimulus isn't limited to network build-outs. It seeks to enhance education and healthcare, and achieve other social benefits. IOCs can improve their chances of winning money if they partner with hospitals, schools, municipalities and others in presenting applications that spell out how a community's residents will benefit.

A few years from now, after billions have been spent, the government wants to demonstrate to taxpayers that it bought something of lasting value. The stimulus package has money to create maps showing where people are served by broadband and where holes still exist. Some states already have created such maps and others are working on them, perhaps giving applications from those areas a leg up. Most IOCs know which parts of their markets are served by broadband and which aren't. Demonstrating to the federal government that a grant recipient can provide credible “before” and “after” maps to document how the money was spent will probably help grant applicants.

An army of consulting engineers, vendors and lawyers already help IOCs apply for government loans and grants as well as planning network upgrades. With the enactment of the stimulus, those efforts have shifted into high gear. For instance, KGP Logistics, a company with a long history as a supply chain specializing in IOC markets, is partnering with Tellabs to increase solution availability in rural America. KGP has hosted IOCs at a conference discussing the stimulus and provides a Website on stimulus issues. An in-house expert at KGP answers questions from callers.

“KGP Logistics is committed to doing everything we can to support our customers as they navigate through the broadband stimulus funding process” said Desi O'Grady, vice president of strategic markets. “KGP has dedicated resources educating and assisting customers with RUS and NTIA funding issues. Our RUS/broadband stimulus program manager is available to any of our customers to answer questions and to educate them regarding stimulus funding announcements, decisions and updates, as well as how KGP can assist them as they apply for funds and deploy their broadband networks.”

Priority will be given to applicants who demonstrate they seek to extend existing broadband networks, said Jeff Heynen, a broadband and video analyst for Infonetics Research. The legislation also gives preference to operators who demonstrate they will open their networks to outsiders.

“Many carriers may choose to put in fiber so they can open the network to another provider of video while they offer voice and data,” Heynen said. “I don't think much ‘rip and replace’ will be funded. Mostly it'll be an

extension of existing broadband. An operator will say that 'I'm already providing broadband to people in rural Iowa or Nebraska and the best way long-term is to run fiber out to remote areas.' I think this will be a boon to GPON and fiber to the home."

Because many IOCs are co-ops where their customers and owners are the same people, Heynen said there is a built-in propensity to embrace projects, such as improving distance learning, that benefit the entire community as the stimulus law intends.

"There's a public trust there," he said. "Priority will be given to public facilities alongside the importance of increased broadband penetration to the home."

The need to quickly apply for grants or loans must be balanced with fulfilling an IOC's vision of its future, said Ron Westfall, research director, access and applications, at Current Analysis.

"This is an opportunity for IOCs to revisit their fiber-to-the-home business plans," he said. "Many have such plans, but couldn't justify the upfront expenditure."

IOCs should also look at wireless technology like WiMax or femtocells to reach remote customers, Westfall said. And while the RUS and NTIA have a huge amount of money available for broadband expansion, rural telcos shouldn't limit their quest to those two agencies, he said.

"The Department of Energy has a smart electric grid initiative with about \$11 billion," Westfall said. "Obviously most of the build-out there will go to electric utility operators. But a small percent of that money will go to telecom build-outs for infrastructure to make the grid smart. That's worth hundreds of millions of dollars. I would take a crack at that.

"This is really a time for IOCs to think outside the box and take advantage of opportunity."

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