

RCR Wireless News

Rural providers in Kentucky, Idaho look to WiMAX

By Kelly Hill

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While large service providers look to WiMAX technology to push the envelope on advanced services, small, rural operators are turning to WiMAX to provide basic broadband service to people who have not had access to it.

Interest is strong, but actual deployments are few at this point. Sprint Nextel Corp. and Clearwire Corp. have emphasized mobile WiMAX, but the rural companies, often wireless Internet service providers, are considering fixed and nomadic WiMAX or pre-WiMAX technology.

Kentucky home

Wireless isn't new to the rural landscape, and provides an opportunity for service that extends beyond the expensive deployment of DSL or other landline services. In Kentucky, the state is relying on small WISPs to help it push its broadband coverage near 100% as part of an ambitious, multi-year project that is being watched closely by other states. With little interest or economic incentive to put expensive wired infrastructure in place to reach small towns in Kentucky's mountain valleys, wireless is bridging the gap, according to Joe Mefford, statewide broadband director for the ConnectKentucky initiative. Kentucky has about 95% broadband availability today, Mefford said, and those last few areas of coverage are the hardest to reach.

"When you get to 90-plus percent coverage, all of the cable and telcos kind of lose interest because there are not enough houses in those remaining areas for them to get the kind of [return on investment] that their investors demand," Mefford said. "We're working with a lot of those wireless ISPs right now to get that last 5%, because they're the only ones that can make the model work. So wireless is very significant in our final buildout."

Mefford added that the state started another not-for-profit, ConnectedNation, to help share its experiences in achieving broadband coverage; he said that Kentucky is in discussions with about 20 other states that are interested in similar initiatives.

Idaho and elsewhere

Alvarion Ltd. provided the equipment for one of the few rural WiMAX deployments in the U.S., by DigitalBridge Communications. The Virginia-based, venture-capital-backed DBC launched a small WiMAX network in the tiny town of Rexburg, Idaho, covering about 7,000 homes using fixed/nomadic WiMAX. DBC acquired two small wireless Internet and cable service providers in Wyoming and Idaho, and plans to expand into markets in the Midwest and South.

Patrick Leary, assistant vice president of market development for Alvarion, acknowledged that one of the reasons that rural U.S. markets lag in WiMAX compared to the rest of the world is due to the fact that much of the 2.5 GHz and 2.3 GHz WiMAX spectrum is tied up within a handful of large companies. But, he added, a bigger factor is that the WiMAX ecosystem is still young, and few companies have received federal approval to sell WiMAX equipment for commercial use.

While companies such as DBC, with no existing infrastructure, hope to leverage the promise of WiMAX's quality of service and relatively low cost to get into the market, Leary added that there are many incumbent local exchange carriers that hold spectrum and see WiMAX as a way to offer broadband beyond traditional DSL, but also as a step toward mobility and roaming agreements down the road.

He also said that the upcoming 700 MHz auction could provide small companies with new opportunities to deploy WiMAX, and added that spectrum "gems are being found every day" in the secondary market, as leases come up or small companies discover spectrum held by local school districts that they are willing to part with.

The rural route?

Leary said that rural WiMAX could follow similar trajectory to other wireless products that have started in rural areas, with small operators banding together for service, roaming and branding agreements (as happened in the early days of the Cellular One brand) and eventually perhaps being acquired by larger companies once they reach a size big enough to be attractive.

Although Leary emphasized WiMAX as a licensed spectrum play, not all rural companies are approaching it that way.

Nathan Stooke, CEO of wireless Internet service provider Wisper ISP Inc., has been eagerly waiting for the Federal Communications Commission to approve WiMAX network equipment from Redline Communications Inc., so that he can begin putting up a WiMAX overlay on his network.

Stooke has an ambitious goal: to be the only WISP within a 60-mile radius of St. Louis. He started the company four years ago, beginning his WISP efforts by trying to get his neighbor's business set up with a high-speed Internet connection. Eventually, he built up a small customer base of between 20 and 30 customers and then began to shape Wisper into a larger company with multiple access points.

Wisper ISP uses unlicensed spectrum to serve its customers in the St. Louis, Mo., area—now 3,500 strong. The company started out by serving primarily rural and suburban areas that were not serviced by DSL or cable companies. Stooke said he was surprised to find demand for his company's services in the more highly populated urban areas as well, and that's where he wants to make use of WiMAX.

Wisper currently uses Motorola Inc. Canopy equipment for its network, but branched out into Redline's products when Moto began focusing on mobile WiMAX rather than fixed.

"I'm really looking to that to provide a rock-solid connection in areas with interference, with line-of-sight issues," he said—adding that trees are still a killer factor.

Stooke said he plans to overlay WiMAX on his network and use it for key customers—such as health care providers—and to grow his network’s backbone. Using WiMAX over unlicensed spectrum is a feasible alternative to spending millions of dollars on spectrum, which simply wouldn’t be possible for most small operators such as Wisper, Stooke said.

“I think it eventually will become our mainstay equipment,” Stooke said.

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