



Salvation at the end of the Rainbow

Service provider positions WiMAX as disaster recovery vehicle

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WiMAX is more than just another way to deliver high-speed data to commercial customers, it's a lifeline when the wireline services go down, according to Rainbow Broadband (RBI), which is building a business in the tough Manhattan market.

Rainbow isn't ignoring the market for delivering an average of 10 Mbps of symmetrical data throughput to bandwidth-hungry customers who might be stuck with a copper line or DSL, but it's found there's a reason for even fiber-connected businesses to consider a wireless link.

"If a building is wired under the ground with fiber, it really only has one option: fiber. If the fiber goes down they have no way of doing their normal business," said Robert Schiff, Rainbow's CEO. "Since we're wireless and don't touch that fiber whatsoever and are coming off the rooftops, if there ever is an issue we can be there."

And there are issues in Manhattan that go beyond the headline-grabbing tragedies that ravage the city.

"A steam pipe blew up on Lexington Ave. and the whole infrastructure under the ground was taken away," Schiff said.

A Rainbow hedge fund customer lost its fiber connection "and they tell us we saved them over \$1 million in the two days because they ... were able to continue to do their business," Schiff said.

Rainbow, which also covers surrounding metropolitan areas like Secaucus, N.J., Brooklyn and Long Island City and has plans to expand beyond that, operates eight hubs with four more planned for next year. The hubs link nodes throughout the city using unlicensed Industrial, Scientific and Medical (ISM) spectrum at 5 GHz to deliver point-to-point service up to six miles. Most links are much shorter, moving through the city's canyons of tall buildings.

While the wired infrastructure might be under constant stress, wireless has its own problems, said Robert Hamm, Rainbow's founder.

"We constantly have to deal with interference (so) within our licensing agreements with the rooftops of the buildings we have provisions to help deal with anybody who may be interfering," he said. Besides that, he said, the wireless carriers in the city know it's in no one's interest to interfere.

"If we're interfering with somebody then the likelihood is they're interfering with us as well," said Hamm. "It's in the interest of both parties to solve the problem ... usually by moving the frequency that we're using ever so slightly or changing the polarization of the antenna."

Ironically, Rainbow uses fiber to link its hubs throughout the city, although that fiber is provided by Con Edison, the power utility, not Verizon because Con Ed "built a completely diverse network."

"We're not dependent solely on the fiber in the ground; our hubs will also have a redundant frequency using wireless," said Schiff.

It costs \$1,250 for a 10 megabit circuit to a building which, Schiff said, is "competitively priced within the market, particularly since they don't have any other choice in these B and C (copper-fed) buildings."