



Broadband Power Line (BPL) technology developer Corridor Systems is working on a way to use its high-speed data over power lines concept to extend and strengthen cell phone networks. Specifically, Corridor, a 3-year-old Santa Rosa, Calif. company, believes its gear can be used to transport cell signals over medium power lines into hard-to-reach cellular dead zones where it can be offloaded from the power grid via small pole- or wire-mounted antennas.

The concept would use a distributed antenna system. Corridor equipment would receive an RF signal from a cell carrier, convert it into a proprietary BPL format, and then transport it down the medium voltage lines to the antenna

where it would be offloaded as wireless signals to serve specific regions of neighborhoods or business campuses. While this would also work with Wi-Fi - and some other BPL vendors are proffering this use - Corridor is primarily interested in cellular service.

"We're finding it resonates with carriers," said David Gaw, Corridor's CEO. "It's broadband across all the spectrum that cellular uses, from 8M MHz to many giga-hertz and it's transparent to all modulation schemes within cellular: 2G, 3G, CDMA."

A raw RF application would be "completely transparent," he said, and could be used as a cellular backhaul as well. While this use "turns out to be pretty financially compelling compared to

traditional telco links," it's secondary to Corridor's primary target: downstream cellular voice delivery that obviates the need to build more towers or otherwise extend local networks, Gaw said.

"We think the cellular extension - the antenna extension - along these swaths of coverage is probably the most unique and most powerful application," he said. "Carriers spend billions a year on coverage extension. The relationships between the carriers and the utilities are already there [so] this really paves the way for a nice easy path for deployment of coverage extension."

The concept is still in Conides labs and is not nearly as baked as the company's mainstream BPL technology, which is being tnaled by Pacific Gas & Electric to deliver ffigh-speed data and Internet connectivity. That technology uses the power line as a microwave single-wire transtrusion line, keeping the signals well away from frequencies that mobile radio operators use by using ISM (Industrial, Scientific, Medical) band - 2.4 and 5 GHz. Gaw

said Corridor can drive 216 A4bps of raw speeds across four 54 Mbps channels.

This transmission method has earned Corridor at least tacit support from the ARRL (American Radio Relay League), which is adamantly opposed to most BPL technology because it claims leakage will adversely affect radio signals. It also provides cost efficiencies because "it allows us to use off-the-shelf silicon ... compared to using power line-specific silicon," Gaw said.

Finally, he said, when the FCC opens up more chunks of ISM spectrum, Corridor "will be able to leverage those directly to expand capacity beyond 216 A4bps."

The concept, he said, has drawn the attention of at least one major carrier.

- Jim Batthold