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Cell booster helps after hurricanes

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The next time South Florida faces a communications crisis after a disaster like Hurricane Wilma, at least one local company hopes to have better prepared clients. [CellAntenna Corp.](#) in Coral Springs has been working on solutions that boost cell phone reception so they can connect with cell towers 20 or 30 miles away in the event of a disaster.

During Hurricane Wilma, the region experienced power outages that took out many land phone lines, while cell phone service was also lost in most areas.

Fuel distribution and water and ice delivery was greatly delayed because drivers couldn't be reached. And many businesses couldn't reach employees for days.

CellAntenna wants to help change that scenario. Its latest product is the CAE750 system, a portable signal repeater that fits in a suitcase. The device can pick up a cell tower signal from up to 30 miles away and its repeater projects the signal to more than 100 cell phones and cell-based Internet connections within a radius large enough to cover a 25,000-square-foot building. It has a battery that can last eight hours.

CellAntenna has sold four of the nearly \$5,000 devices to [FEMA](#), President and CEO Howard Melamed said.

"In any situation, you can set this up in a building and, within minutes, have full cell phone communications," he added.

CellAntenna lent one of those systems to [NVision Solutions](#), of Bay St. Louis, Miss., days after Hurricane Katrina struck, said Craig Harvey, CIO of the mapping company.

The hard lines were down in Mississippi and the flooding forced NVision and Hancock County's emergency operations center, which the company works closely with, to move to a school building. However, the old structure had horrible cell service inside, Harvey said. CellAntenna's repeater system provided cell service for his company and the emergency operations center for four weeks, he said.

"It had a significant impact on our ability to communicate and function," Harvey said.

The CAE750 is best for agencies that need to immediately deploy in disaster zones, Melamed said. For a company with a fixed location, an amplified antenna to pick up cell tower signals can be placed on the roof, connected with a repeater to issue the signal inside the building and given a battery backup for less than \$2,000. If cell phone service is needed for individuals, such as drivers in a distribution chain, a car-top antenna to boost cell phone reception can be purchased for less than \$300.

A satellite phone can also provide reception and isn't dependant on any cell phone towers. But it carries a high per-minute charge and requires a phone for each user. A repeater system allows everyone within range to use their normal cell phones at normal rates.

Cell phones pick up signals from the nearest cell towers, usually a mile or two away and, as they travel along, their signal is handed off from one tower to the next. When there's an interruption in

service, that means the cell tower that was supposed to carry the signal is down.

"It's like a quarterback handing the ball off, but there's no one there," Melamed said.

An amplified antenna will pick up the strongest cell tower signal available, even if it's a county away. Wilma took out most - but not all - South Florida cell towers.

Hurricanes have provided an urgent reason to boost cell phone reception, but Melamed has been at it for four years. After leaving the commercial real estate engineering business, he and wife Barbara Melamed started CellAntenna in 2002, providing antennas to boaters so they could use their cell phones miles offshore.

Now, it works with companies and government agencies that want cell phone service inside buildings that usually block reception. The metal in the walls of some buildings acts as a cage that blocks wireless signals, but adding a rooftop antenna and several signal repeaters inside can provide service. Companies that have ordered this include [Motorola](#), Harris and [Lockheed Martin](#), Melamed said.

Providing cell phone service after hurricanes really took off last year after Katrina, as many places in the Gulf Coast were without service for months, he said.

CellAntenna has grown from \$500,000 in sales in 2002 to about \$6 million in sales in 2005, Melamed said. It recently opened offices in England and Poland, as its sales in Europe have grown.

"If you really need service and define specifically what you want to accomplish, you can have a repeater system that fits your budget," Melamed said.

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