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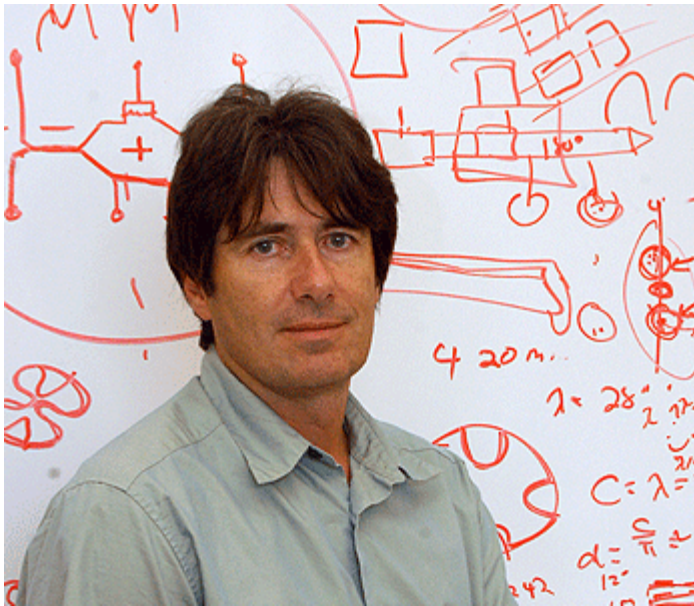
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Shane Gerardi photo

Charles D. McCarrick is the founder of Micro-Ant Inc.

Micro-Ant picks up mighty contracts with its little antennas

08/22/2005 07:52 AM

By **Ethan Forman**

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Tiny Micro-Ant Inc. of Fall River has received a large contract for its low profile satellite antenna tracking systems that fits on the roof of a police car or emergency vehicle, or can be mounted on military vehicles to help soldiers communicate.

The company has received orders for its Micro1600 dome antenna, worth more than \$3 million, from a variety of customers in the United States and Canada, said Micro-Ant founder and president Charles D. McCarrick. A big customer for Micro-Ant's small antennas is Sirius Satellite Radio.

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Micro-Ant officials said satellite owner and mobile communications provider Mobile Satellite Ventures, of Reston, Va., the operator of the MSAT1 and MSAT2 satellites that cover North and Central America, has approved the Micro 1600 unit for use in its network. The company plans to churn out 100 units a month in Fall River.

The company makes L-band satellite antennas and tracking systems that are 10 inches in diameter and 2 1/2 inches thick. The units can fit on the roof of a car, McCarrick said, and survive at wind speeds of up to 120 mph.

McCarrick said the Micro 1600 proves good things can come in small packages. "We looked at some of the other products on the market and came up with ways of making them much, much smaller so they would be appealing," he said.

McCarrick said emergency responders or homeland security officials that need a secure line can use these antennas.

"You can have user groups so that you could have eight to 10 people communicating at the same time," McCarrick said.

But the antenna is not just for military or security types.

"I have one myself for my boat when I'm offshore fishing," McCarrick said. The antenna device accepts a satellite phone that can be used to make regular phone calls.

The company's antennas, which also include low-profile microstrip antennas, have been bought for the National Security Agency, the Office of Naval Research, the Army, and the Air Force.

Harlan Howe, longtime editor of Norwood-based Microwave Journal, said Micro-Ant is onto something big.

"They have a very interesting, low profile tracking antenna. I can't put on a dollar value on the market for that but I can say it has tremendous commercial appeal," Howe said.

He said the team at Micro-Ant, which includes Chief Technology Officer Greg Poe, is experienced and knows its way around the industry.

Quorum Communications Inc. of Irving, Texas, was one of Micro-Ant's first customers. It has incorporated the company's flat panel, microstrip antenna technology into a military communication system that soldiers are carrying in rucksacks in Iraq and Afghanistan.

The system consists of two 1/2-inch thick, 15-inch square panels that unfold, and that a soldier can wave in the air to acquire a satellite signal and then plug it into a laptop, said Rick

Fogle, Quorum's vice president.

"They have a lot of competitors," Fogle said of Micro-Ant. "There are other companies in this market that do this stuff. I think their speciality is the microstrip antennas. That seems to be their strong point. But when I initially got a hold of Charlie, I had problems with the microstrip antenna from another vendor and (McCarrick) literally built me one in two weeks for half the price."

Micro-Ant takes its name from the term "microwave antenna." McCarrick founded Micro-Ant in his Plymouth basement two years ago.

Micro-Ant employs seven full-time people and three or four student interns, McCarrick said.

McCarrick, 48, is an electrical engineer and a scientist who earned his Ph.D. at University of Massachusetts Dartmouth. He formerly worked for antenna maker Seavey Engineering Associates Inc. of Pembroke before it was bought by Antenna Research Associates Inc. of Beltsville, Md.

McCarrick said he wanted to create innovative antenna designs on his own and so he left Seavey. He launched the company with loans from friends and credit cards.

"I started my company in my basement and I was down there for about eight months," he said. In November it moved to the Advanced Technology & Manufacturing Center of UMass Dartmouth in Fall River, a 600,000 square-foot facility in the South Coast Research and Technology Park.

McCarrick helped set up an antenna lab in the facility, but it did not get much use. That's how McCarrick struck on the idea of the lab having a commercial purpose.

"We are paying our way," McCarrick said. "They are not giving away anything free. But it's a huge help," especially the shared machine shop and other amenities in the center.

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