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(Company Profile: PositiveID)

A Chip Off the Old Block

By Amy Keller

Consumers liked implantable microchips in their pets but didn't warm to the idea of putting them under their own skin. How a Delray Beach company retargeted its technology — and retooled its marketing strategy.

CEO Scott Silverman displays glass encapsulated chips, which are inserted under the skin, and the scanner, which reads a 16-digit identifying number transmitted by the chips.

photograph: Newscom

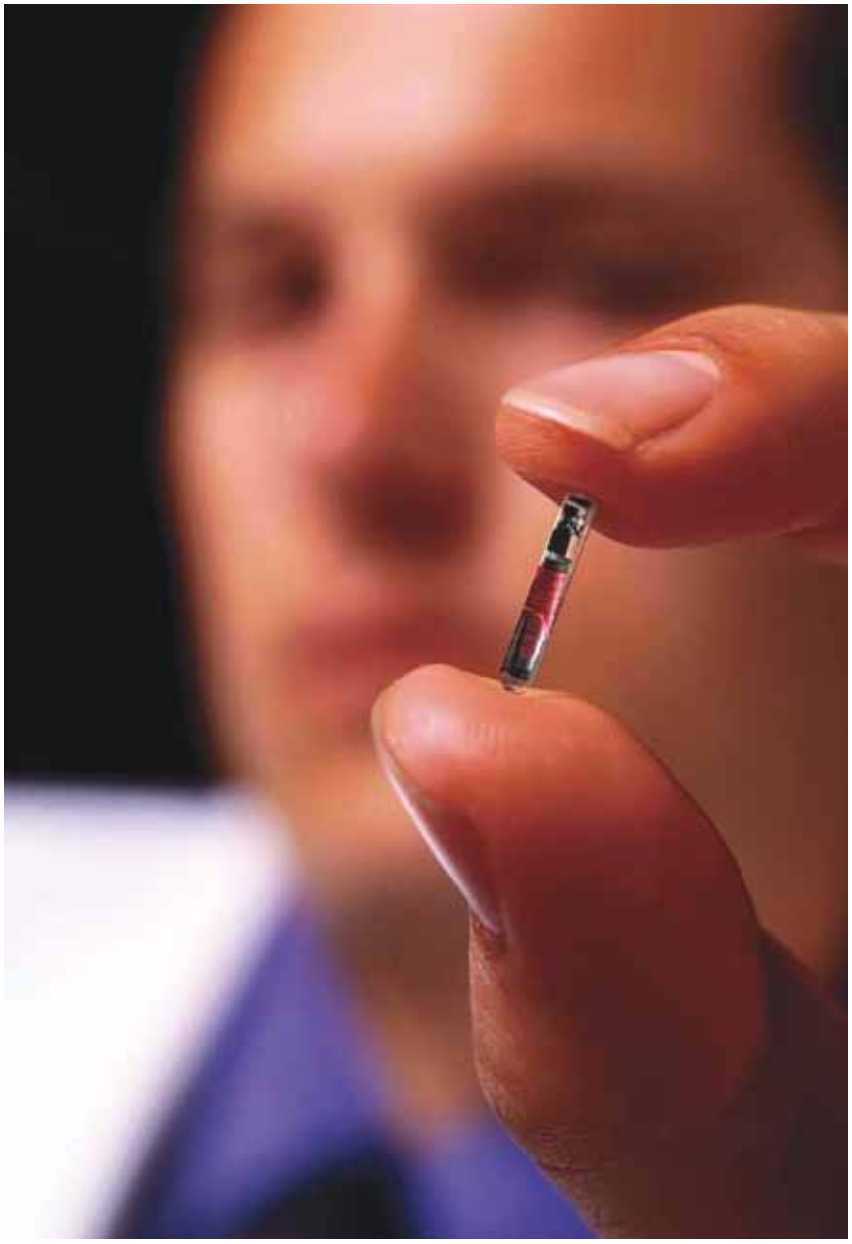
"It's a product that took hold in the pet community and has had a lot of controversy in the human community."

— PositiveID CEO Scott Silverman

Eight years ago, when Applied Digital Solutions of Delray Beach introduced a microchip that could be implanted in humans, company executives thought they had a product that would create the ultimate portable medical record. The rice grain-sized VeriChip could save lives by providing access to vital health information in emergency situations when the patient couldn't speak. One potential use: Keeping track of Alzheimer's patients who are prone to wandering off but are often unable to communicate effectively because of their illness.

The technology was even familiar — almost identical to the chip that millions of Americans have implanted in their pets for identification purposes. Like the pet chip, the VeriChip consists of a glass encapsulated radio frequency identification tag that's injected under the skin. When exposed to a scanner at close range, it transmits a 16-digit identification number that can be linked to a secure patient database with information on everything from the patient's drug allergies to pre-existing medical conditions.

The company thought it had a winner. But the chip got under the skin of some who worried that it could be used as a surveillance device. Pets were one thing, but most consumers were uncomfortable with the notion of having a



PositiveID envisions linking its chip to a database containing information on a patient's drug allergies and pre-existing health conditions. Another possible use: Keeping track of Alzheimer's patients.

photographs: Newscom

RFID tag under their own epidermis. Scott Silverman, then CEO of VeriChip Corp., the Applied Digital Solutions subsidiary that marketed the chip, disclosed in a 2004 interview with *Slate* magazine that the company's own research indicated that nine out of 10 people were uncomfortable with the technology's use.

VeriChip's business took a turn for the worse in late 2007, when studies indicated a potential link between RFID transponders and cancer in lab animals. Adding to the company's woes, several states passed laws prohibiting companies and governments from requiring microchip implants.

Despite an aggressive marketing campaign, sales of the company's VeriMed Health Link System — incorporating the RFID chip, a handheld scanner and an online health record — fell from $76,000 in 2007 to $43,000 in 2008. Another VeriChip subsidiary, Xmark, which sold wearable RFID products, continued to do well, accounting for the vast majority of VeriChip's revenue.

After selling Xmark in 2008, Silverman decided to take a "few months hiatus" and stepped down as CEO — until his former colleagues at Applied Digital announced in July 2008 that they were planning to liquidate what remained of VeriChip to pay off debt.

At that point, Silverman stepped back in, bought their shares and became majority holder of VeriChip Corp. "I believed fully in the implantable chip technology that remained as an asset," he says. "The company was still listed on Nasdaq, and a Nasdaq listing has significant value."

Silverman says his company, which he renamed PositiveID Corp. last year, is no longer actively marketing the implantable chip for identification purposes but is instead working on using the technology for a variety of medical diagnostic purposes.

To that end, PositiveID has partnered with a Minnesota firm called Receptors to develop a microchip that can detect glucose levels in the body and transmit a blood sugar reading to a scanner. The Minnesota company recently received two patents for technologies that will serve as the basis for the device. PositiveID's glucose sensor is years away from commercialization, Silverman says, but adds that, "In theory, way down the road, that same chip could contain a device to release insulin as well."

Meanwhile, the company hopes to use similar technology to create a non-implantable test kit that could quickly identify various flu strains. Silverman says the company is already in phase 2 development. It hopes to complete the prototype before the next flu season.

The company is also developing another non-implantable device that can check the blood sugar levels of diabetics by measuring the levels of acetone in their breath as they exhale. PositiveID purchased the intellectual rights to the technology earlier this year from Easy Check Medical Diagnostics, which is headquartered in Miami and Tel Aviv. "All we have to do is miniaturize it," Silverman says.

In addition, the company has completed a prototype "iGlucose system" to automatically and continuously communicate blood sugar readings to an online database. The company envisions integrating its iGlucose system and its other rapid testing devices so that all test results could be automatically downloaded into a patient's online personal health record.

To create a health record compatible with Microsoft HealthVault, Google Health and other electronic medical record systems, PositiveID has partnered with Boston-based FIS, a provider of technology to the banking industry.

Until those products hit the market, PositiveID is operating using revenue from NationalCreditReport.com, a subsidiary that provides credit monitoring and identity theft protection products. Those products bring in approximately $250,000 a month. The company's main source of capital comes from selling shares of stock, which trade on Nasdaq as PSID.

The company, Silverman says, is debt-free with about $6 million in cash and is selling another round of stock — in part to fund the testing of its planned products.

While the controversy generated by PositiveID's implantable chip has quieted down, Silverman is still wary that any new implantable products could arouse fears of Big Brother. "I've been around a long time, and I know if we ultimately get some type of federal approval or FDA approval for the implantable glucose chip, I'm sure some people will raise their head again — but for now, we're focused on delivering products." FT

The Jacobs became the first VeriChip-implanted family in 2002.

VeriChippings

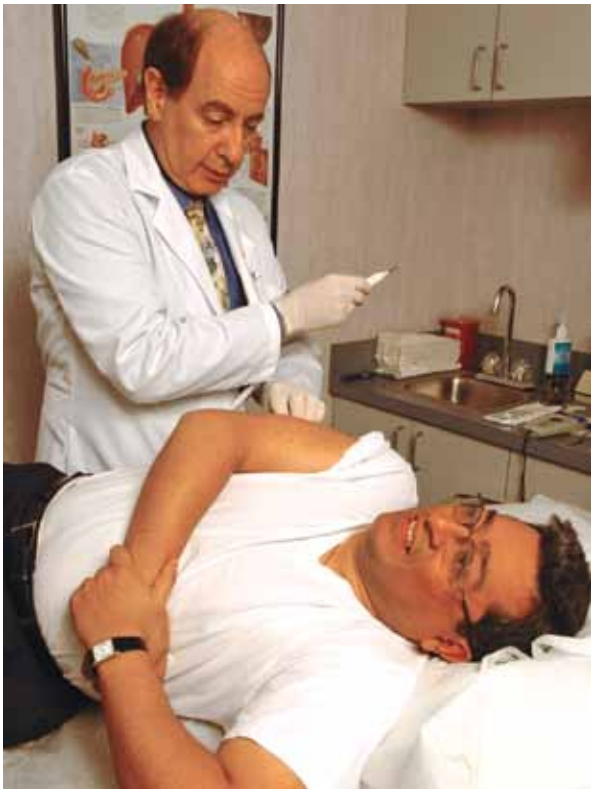
› In 2002, Jeff and Leslie Jacobs, and their then-14-year-old son, Derek, became the first people to be implanted with VeriChip's controversial RFID chip — a move that earned the Boca Raton family considerable media attention. (Derek died in a motorcycle accident on Sept. 30, 2006, at age 18.)

› In 2004, Mexico's Attorney General, Rafael Macedo de la Concha, told the media that he and at least 18 employees had been implanted with the VeriChip for security reasons.

› In 2004, the Baja Beach Club in Barcelona began offering VIP patrons VeriChip implants that provide them special access to VIP areas and links to prepaid accounts to pay for drinks.

› In 2005, in the wake of Hurricane Katrina, VeriChip Corp. donated implantable chips to the Federal Emergency Management Agency, which used them to track and identify corpses in Mississippi and Louisiana.

› Between 2007 and 2009, more than 100 patients and caregivers who were clients of Alzheimer's Community Care in West Palm Beach received VeriChip implants as part of a project to provide a safety net for Alzheimer's patients to help identify them and notify caregivers in case of an emergency.



Implanting the chip