
Under their skin; Local piercer tries his hand at implanting microchips; [Final Edition]

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Full Text (733 words)

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When Jesse Villemaire picked up the phone late one night in January, he didn't know what followed would be one of the strangest conversations of his life.

"He asked if I'd be interested in implanting some kind of chip under his skin," Villemaire said of the young man on the other end of the line. "I was surprised, to say the least."

The caller was Will Donelson, a 21-year-old computer networking student from Lockport, N.Y. He was hoping Villemaire would be willing to implant rice-sized microchips, called RFIDs (short for radio frequency identification), into his hands.

"I was lost on the technology side and they were lost on the implantation side," said Villemaire, who had already implanted titanium bars under the skin of about 10 customers.

After doing some research, Villemaire got excited about the idea and told Donelson he'd be more than willing to "tag" the four friends.

The quartet drove to Thrive Studios in Cambridge in late January, ready for Villemaire's six-gauge needle.

The tags, implanted in the flesh between the index finger and thumb, are small glass-cased chips which passively relay radio signals.

Though Villemaire said he's by far not the only piercer who could do the implant, he's one of only two in the profession who've actually done it.

The labour cost the friends \$100 apiece, but the tags cost only a few bucks. They hold a unique code which can be read by a reader held a few centimetres from the implant site.

The whole thing isn't as crazy as it may seem, said Donelson.

He uses his tags to log on to computers password-free, but he's also developing more applications, including a lock system for his home that would allow him to enter by just swiping his hand.

"It's the first step on people's rapidly accelerating ability to integrate more technology into themselves physically," he said.

Similar chips have been implanted in family pets for years, ensuring fast and easy identification. RFID technology is also being used in the commercial sector to track inventory.

But voluntary human tagging isn't quite so common yet.

In fact, the 30 or so people who have declared themselves tagged on a web forum devoted to the subject have become a bona fide subculture, posting their achievements and progress and sharing ideas for application.

Only one type of RFID chip, Applied Digital Solution's VeriChip, has been approved for human implantation in the U.S., where it is used to match codes from the implanted chips with a patient's medical records.

The chips have not been approved for human implantation in Canada, said Donna Sandburg of Applied Digital Solutions.

While the data contained on Donelson and his friends' chips can be altered and encrypted, VeriChip's information cannot be changed. But the tags have been cloned by hackers on the Internet.

That kind of security risk, along with the invasiveness of implantation, present real problems for wider application,

said Ian Kerr, a University of Ottawa law professor who is researching the legal and ethical implications of RFID implants in humans.

"The real issue is, are they a solution or a problem in search of a solution?" he said.

"It seems that most security experts agree that VeriChip, as one example, is not in any way secure. You're providing an identifier that, because it's not secure, may present more of a threat to security, the opposite of what it's supposed to achieve."

Kerr said encrypting numbers, specifically those linked to personal information databases, also presents problems.

"It then becomes a question of who has access to it," he said. "Should nurses have access to it? Who needs to know someone's abortion records if they're being treated for a cut?"

Donelson and his friends said they have no plans to link their chips to any personal information and the suggestion of offering up their numbers to a government database is "laughable."

They're more interested in how far they can push the technology.

"If I get to the point where I own my own house, I could customize it all to my tag and built tailored to me. Keys could be lost or given away, but I can't give this away."

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[Illustration]

Photo: PHILIP WALKER, RECORD STAFF / Jesse Villemare of Thrive Studios in Cambridge holds a rice-sized RFID chip like the ones he implanted under the skin of four U.S. computer enthusiasts.

Credit: RECORD STAFF

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Section: *FRONT*

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