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Sweet microchip love

Meet a couple that's never had to have the 'I guess you can get the keys to my apartment' conversation

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SPECIAL TO THE STAR

PHOTO COURTESY OF AMAL GRAAFSTRA
Amal Graafstra and Jennifer Tomblin have each had microchips implanted in their hands.

In today's paranoid dating pool, where fake cellphone numbers and multiple email identities are par for the course, Jennifer Tomblin and Amal Graafstra have made the ultimate technological romantic gesture.

The duo have used RFID implant technology to create 24-hour all-access passes to each other's computers and homes — all with just a swipe of their hands.

RFID stands for Radio Frequency Identification. An RFID implant is a tiny chip encoded with information, sealed into a glass tube about two millimetres by 12 millimetres in size, that gets sterilized with rubbing alcohol, and then inserted under the skin. You pick up some RFID compatible software, program an electronic lock to recognize that information in the chip and with a wave of the implanted hand, you're opening the door without a key.

Think of it as a key swipe card, inside your hand. Along with opening doors, an implant can be used to log into a computer or to start your car, for instance.

"People get implants all the time," says Graafstra, 29, who doesn't think his high-tech connection with Tomblin is that unusual. If you think about it, how many men have bought girlfriends a new set of breasts?

Graafstra, who works in remote server management in Washington state, started researching RFID implants a few years ago and got hooked.

He ordered a chip from http://www.phidgetsusa.com, wrote some software to accompany it, and asked a client, a cosmetic surgeon, to insert his first chip in March of 2005.

His family doctor put in the second with an injection needle, the same kind used to insert RFID tags in pets, last June.

Tomblin, who lives in Vancouver, had her implant put in by Graafstra's doctor six weeks ago.

"For me, it has a romantic appeal to it," says Tomblin, 23. "I was joking about calling it the engagement chip."

She says she can't imagine living without the implant. But it wasn't an easy sell at first.

"Mostly I was concerned about the medical aspects: Would it break in your hand? Does it hurt? Can you feel it all the time?"

Tomblin watched Graafstra make it through the year RFID injury-free before getting her chip. Graafstra also caught her interest by creating a bunch of RFID programs, all in his upcoming book *RFID Toys,* which comes out Feb. 20 (see http://www.rfidtoys.net to order). The book will reveal Graafstra's method for how anyone can implant themselves with RFID.

RFID implants aren't new. A company called VeriChip, which stuck members of a Barcelona club with VIP tags in 2004, has been selling "security" implants for years. Kevin Warwick, a professor at the University of Reading in England, has also had chip implants placed into his forearm as part of his research into

cybernetics. But Graafstra was the first to put one in his hand and make plans to teach people to do the same.

That's not to say Tomblin's experience went as smoothly as Graastra's. "They were putting the Novocaine in and I passed out," she says.

The chip took just 15 seconds to insert. Her hand healed quickly and the only evidence is a pinprick-sized mark, and a lighter key chain.

The chips allow the couple to open each other's front doors and log onto their computers. Graafstra and Tomblin are on each other's "approved list." That means the programs protecting their stuff are designed to recognize each others implants.

If they split, the easiest solution is that a doctor can make a cut and pop out their chips. Or they could be left in. Graafstra would then have to log onto both of their computers and re-program the security software — which he actually designed and installed — so the programs wouldn't respond to the implant.

Then he would have to tackle the doors. If Graafstra wanted to keep Tomblin out, he'd have to crack open the electronic lock on his door, remove the microprocessor inside and reprogram it so it didn't recognize Tomblin's chip. And vice versa.

"It wasn't designed for easy user access," admits Graafstra.

But one aspect has already been taken care of. The chips are essentially invisible.

"He can kind of push it up and you can see the chip," Tomblin says about Graafstra's implant.

"But with mine you can't even see it or feel it. It's really imbedded. So it's like magic to me."

And that's how a lot of people see it.

"The physical aspect of getting it implanted is nothing special," says Graafstra. "The social reaction is huge."

The surprising affordability of RFID technology might make it more common than you think

Chips like the one in Graafstra's right and left hand will set you back between $2 and $5 (U.S.). He designed all his own software, so that part was free. The extra hardware, like locks, ranges anywhere from $30 to $600 (U.S.) and up.

For a couple that's made such an unconventional commitment, the duo met in a surprisingly ordinary way.

As Graafstra tells it "fate" had him drop in to a mutual friend's home in Vancouver in November 2004.

"He just walked up the stairs and I had one of those moments," says Tomblin.

So they went to a movie, checked each other out over popcorn and then traded emails.

"Emails turned into books, and books into tomes and it was taking an hour to read and an hour to write back," says Graafstra.

Long story short, they made more physical contact, fell in love and following that into technological convenience.

Of course, Graafstra's flexibility helps as well.

"He totally works around my schedule," says Tomblin, who's enrolled in 10 full-time courses in a marketing management program at the British Columbia Institute of Technology.

It takes an hour and a half for Graafstra to drive from Washington to Vancouver. But he's willing to make the trip.

"Because I work for myself, my time and work is really flexible and allows me the freedom to visit her in Vancouver a few days a week," says Graafstra.

So it's a normal, functioning long-distance relationship. With some extra technology.

"It's definitely never something I thought would happen in a relationship," says Tomblin.

"It did spur on a lot of deep talks about what we were in this relationship for and how long we plan on being in it, all the good stuff."

So have the chips brought them closer together?

"People get tattoos of each other all the time," says Graafstra. "That's more permanent, and I guess you could say more romantic than a chip."

It's true. Few things say recklessly committed romantic like a huge heart with your initials on someone's appendage. But this is unique.

"It links you in a way that nobody else has," Tomblin says proudly.

But she suggests doing a lot of research before diving into the tech end of the romantic pool. "That is a choice you need to make on your own."

To learn more about RFID technology try http://amal.net/rfid.html. To find out whose getting "tagged" in Canada and around the world head to http://tagged.kaos.gen.nz/.