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## The key to the future lies in this man's hands

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WHEN Amal Graafstra wants to check email, he signs on to his computer with a flick of the wrist. Inside the webbing between his thumb and forefinger, a microchip the size of a grain of rice verifies his identity through an electronic reader and unlocks the PC.

The IT expert can unlock his car or start his motorcycle the same way. But the "killer app" comes into play when he returns from work, perhaps with groceries in each hand. "As soon as I stand by the door, I can just nudge my hand against the reader panel, which is right by the doorknob, and it unlocks," he says. No fumbling or juggling, no aiming a key in the dark. He simply walks in.

Mr Graafstra is among a small number of hobbyists - estimated to be fewer than 300 worldwide - who have radio frequency identification (RFID) chips implanted in their bodies.

Mr Graafstra, who lives in the US state of Washington, is in Australia to discuss his experience as part of a three-day conference at the University of Wollongong next week exploring the relationship between humans and technology.

RFID chips gained widespread acceptance in the 1990s when they were first used to identify pets. But in 2005 Mr Graafstra applied the technology to himself so he could stop carrying keys for work and home. He underwent a five-minute procedure by a cosmetic surgeon to become microchipped and then programmed the locks in his life to recognise his chip.

He has been a lightning rod for how others respond to the idea of microchipping humans. Some see his action as ingenious; others see conspiracies and cite the Book of Revelations. Early on, unsolicited publicity for his work prompted an email that said: "You are the devil's mouthpiece."

But Mr Graafstra is no proselytiser for microchip implants. He believes biometrics - iris scans, voice patterns, even the way people walk - will prove superior for verifying identity.

What interests him is creating a dialogue on technology and its uses, which is why he will be at the International Symposium on Technology and Society.

The conference organiser, Katina Michael, an associate professor in the school of information systems and technology at Wollongong, predicts RFID technology - implanted or worn - will become part of daily life.

In the US, VeriChip Corporation has approval from the Food and Drug Administration to implant microchips in humans. Its chips hold a 16-digit number that can link with medical records to identify an Alzheimer's patient who has become lost or warn that an unconscious patient is allergic to penicillin.

Dr Michael acknowledges RFID chips bring benefits and admires Mr Graafstra's ingenuity, but she points out that he alone decides how his chip is used. She harbours concerns that microchips implanted by corporations offer little control for other implantees, particularly chips capable of storing greater amounts of information.

Unlike Mr Graafstra, she says, people who have been chipped may have little say about what data is collected and how it is used. And recently, concerns have emerged that a coating on microchips could prove cancerous.

"The dangers definitely outweigh the benefits with regard to commercialised applications," she says.

"When we're talking about opting in to an application such as an implant from a commercial vendor, you've lost your freedom."

*This story was found at: <http://www.smh.com.au/technology/technology-news/the-key-to-the-future-lies-in-this-mans-hands-20100604-xklu.html>*