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IS GOOGLE SET TO KILL OFF THE PASSWORD?

Search giant experiments with a physical key – either a small USB drive or even a ring with wireless chip

MARK PRIGG

PASSWORDS have become an increasing problem for many – but Google could be set to replace them entirely.

The search giant is experimenting with USB keys, cellphones and even jewellery that can act as a physical “key” to give users access to their account.

The firm’s security bosses are set to publish their findings next month – and say they could soon be commonplace.

In the upcoming issue of IEEE Security & Privacy Magazine, Google’s vice-president for security, Eric Grosse, and engineer Mayank Upadhyay are set to detail what is basically a physical key with a “smart chip” embedded in it.

“Along with many in the industry, we feel passwords and simple bearer tokens such as cookies are no longer sufficient to keep users safe,” the pair write in their paper, according to Wired.

To log on, users simply place the tiny USB drive into their computer. The firm is also believed to be experimenting with wireless chips that are built into some cellphones and which can even be built in jewellery.

“We’d like your smartphone or smartcard-embedded finger ring to authorise a new computer through a tap on the computer, even in situations in which your phone might be without cellular connectivity,” the team write.

One option uses a tiny USB key called a YubiKey.

When the user plugs the key into a laptop, they are automatically logged into all of their Google accounts – without having to type in a password. Another option uses a “smartcard-embedded finger ring to authorise a new computer through a tap on the computer”.



The USB keys can be placed on a keychain.

The firm is also believed to be addressing the obvious problem with the system – users losing their “key”. It is thought to be developing a simple system to replace them.

However, the pair say they will have to rely on websites to support the scheme.

“Others have tried similar approaches but achieved little success in the consumer world,” they write.

“Although we recognise that our initiative will likewise remain speculative until we’ve proved large-scale acceptance, we’re eager to test it with other websites.” – Daily Mail

HOW IT WORKS

The tiny key can be used in any machine

with a USB drive, and acts as a physical “key” to unlock the user’s account. It can automatically log users into all of their accounts, and even into their favourite websites, without ever asking for a password.



MEET THE GUYS WHO ENSURE YOU ARE ALWAYS ONLINE

Wi-Fi hotspots are everywhere in South Africa, the most established service being AlwaysOn. Helen Grange met the two men behind the service

REMEMBER when Wi-Fi spots were like oases in the desert? When laptops converged in their droves on Mugg & Bean coffee shops to thirstily drink from its public broadband?

Wi-Fi hotspots even attracted “squatters”, and still do. These are laptop users who spend most of the day online in a Wi-Fi cafe or restaurant nursing a single cup of coffee – or, worse, lurking nearby.

“Before I had ADSL installed at home, I’d go to my local Mugg & Bean daily to check my e-mail and internet sites in the 30 minutes provided free,” said one. “It became expensive, especially as I would stay longer and end up buying more time and more food and drink. So a couple of days a week, I’d just park outside for a quick download.”

Seasoned Mugg & Bean and Wimpy Wi-Fi users will be familiar with connecting to and logging on to the AlwaysOn landing page, then typing in their username and password to get connected.

They get 15 to 30 minutes of free internet usage, compliments of the restaurant, after which they may buy time from AlwaysOn, at between R30 for half an hour to R145 for four hours.

But who are the entrepreneurs behind AlwaysOn, who provided such a hugely desirable service, and not a minute too soon? Smaller competitors like WirelessG and Skyrove have since come on to the scene, but AlwaysOn is the most established and widespread Wi-Fi brand.

Behind this popular service are a couple of electronic engineers, Nico Pretorius, 44, who qualified at Stellenbosch University, and Jaco van Tonder, 47, a University of Pretoria graduate. The two were working at eAirports when they started looking at ways to provide South Africans with what had become an established and popular phenomenon abroad – Wi-Fi internet access in airports and coffee shops.

“The idea back then was to provide an internet service to international travellers at airports,” said Pretorius, chief executive of AlwaysOn. “So that’s where we started, the major airports, when we launched the business in 2003.”

But the service really took off in December 2004 when AlwaysOn was made available at Mugg & Bean, the first subscribers being the franchises in Brooklyn in Pretoria, Parkhurst in Joburg, Canal Walk in Cape Town and Musgrave in Durban.

Since then, AlwaysOn has become the leading Wi-Fi hot-spot provider in southern Africa, having the most extensive network and more international roaming agreements than all other South African providers combined.

In South Africa, more than 1 150 venues have subscribed to the service. These include all the major airports, some shopping centres and most franchises of Mugg & Beans,



AlwaysOn co-founders Nico Pretorius, left, and Jaco van Tonder outside their offices in Centurion. They have the largest network of Wi-Fi hotspots in South Africa, and provide coverage in more than a million venues in more than 110 countries.

PICTURE: MOTSHWARI MOFOKENG

Wimpy, McDonald’s, Woolworths cafés, Seattle coffee shops as well as Holiday Inns, Tsogo Sun hotels, Sun International hotels, Protea hotels, Town and City Lodges, and a large number of conference centres, guest houses and apartment blocks all SA.

Even residents of Kuruman, Postmasburg and Kathu in the Northern Cape can access AlwaysOn at their local Wimpy.

In the rest of the world, AlwaysOn has coverage in more than a million venues in more than 110 countries, in mostly coffee shops and restaurants as far afield as the US, South America, the UK, Europe, Asia, the United Arab Emirates and Australia.

The company’s broadband partners locally include Vodafone, MWeb and Internet Solutions. At the end of last year, AlwaysOn teamed up with iPass (the Wi-Fi company with the world’s largest mobile broadband footprint) to expand its coverage overseas, says Pretorius.

The preferred AlwaysOn deals at accommodation establishments are the data

packages, which locally range from R30 for 75MB, valid for 30 days, to R375 for 3GB, valid for a year. Another popular option is the five-day access deal costing R295, while overseas a popular choice is the \$15 (R131) a day deal for unlimited access.

The business model, like similar Wi-Fi services overseas, is based on venues subscribing to AlwaysOn and paying a small monthly fee. One Mugg & Bean, for instance, pays R250 a month for the service.

It naturally fees like wildfire because, for a minimal fee, the venue is able to offer a desirable value add, attracting more customers. So together with the fees from individual users, who pay for internet time or data with their credit cards or buy vouchers from the hot-spot establishment, AlwaysOn is collecting fees from its huge bank of venue subscribers.

“All these bits and pieces add up and make the business viable,” says Pretorius. “And the bigger our network of subscribers, the more lucrative the business becomes. At the moment we are adding 40 to 50 venues a month to our network, mostly coffee shops and restaurants.”

The venues do not pay any fees other than the monthly subscription. AlwaysOn supplies and maintains all hardware, which includes an AlwaysOn hot-spot router and Wi-Fi access point, which is usually fitted to the ceiling, and the broadband connection in most cases is an ADSL link, he says.

A more recent innovation by the AlwaysOn duo is AlwaysOnSmart. This enables smartphones, tablets and laptops automatically to connect to AlwaysOn hotspots without having to log in every time, once the once-off registration has been done.

For international travellers, an AlwaysOn Wi-Fi app is available that enables them to connect to AlwaysOn hotspots, which can mean a huge saving on their internet data costs while roaming.

But the real genius of Pretorius and Van Tonder’s idea lies in the fact that they developed their own software for controlling

access, billing and monitoring (of all the components).

“South Africa’s broadband rates are much more expensive than overseas, so we couldn’t afford to buy licensed software,” says Van Tonder.

“We did extensive calculations, looking at the options abroad, then decided that for the business to be viable, we’d have to develop our own software. The benchmark we set was to be able to assemble a complete managed Wi-Fi solution for a coffee shop environment for less than R5 000.”

The only imported parts of the AlwaysOn solution are the router and access point hardware, which are manufactured overseas. “The components are shipped to us and we assemble the routers here at our offices,” says Van Tonder.

The offices of AlwaysOn are a modest block in the main commercial road of Centurion. Despite their success, Van Tonder and Pretorius moved into them only two years ago, having operated the business from home.

The staff complement now is 24, with a further 10 contractors across the country who may be called on for troubleshooting and repairs to routers, lightning being the primary cause of damage.

“About 85 percent of the problems we experience can be sorted out telephonically, though,” says Van Tonder.

The most heartening part of the AlwaysOn story is that Pretorius and Van Tonder pulled it off without ever having to take a bank loan.

“We started it with our own personal capital, and never owed a cent since. We’ve always run it lean and mean,” says Pretorius.

And if they had to offer advice to other upcoming entrepreneurs, it would be: “Do your calculations, set your goals and work hard at it. Trust your instincts, believe that you can achieve your goals, manage your cash flow carefully and try to make smart decisions along the way.”

See alwayson.co.za for your nearest hotspot.

Wi-Fi is a popular technology that uses radio waves to provide wireless high-speed internet and network connections.

South Africans look forward to being able to be connected wherever they are

Wi-Fi in South Africa is growing apace and is expected to be far more pervasive by 2015. The trend at present is for business enterprises to become Wi-Fi-enabled.

“Enterprise IT trends will predominantly be in the mobile and cloud computing space,” comments Michael Fletcher, sales director of Ruckus Wireless sub-Saharan Africa.

Christopher Geerdts, chairman of the SA Wireless Access Providers’ Association, says Wi-Fi will soon surpass wired traffic.

“This is good news for South Africa, where much of the landscape is not serviced by large telecommunications operators and fixed line service providers. Independent wireless internet services are an important part of South Africa’s telecommunications

industry, enabling countless schools, hospitals and community institutions to connect to the internet.”

In the US, nearly everywhere you go, a little Wi-Fi icon lights up on your mobile device to show that a hotspot is nearby. Smartphone users can switch over from their cellphone network to Wi-Fi, saving on data charges. “Consumers now expect to have Wi-Fi access when they are sipping a latte in their favourite coffee shop, watching their team score the winning touchdown at the stadium, or even when waiting in line to pay for their groceries,” blogs Stuart Taylor, a director at the US-based Cisco Internet Business Solutions Group.

Hopefully, Wi-Fi access will one day be as ubiquitous in South Africa.

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