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case studies 2011

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Case Study # 10:

David Beckham, victim of RFID theft!

It's the stuff of movies. A criminal gang that sets out to steal hundreds of cars, each in under 60 seconds, using the latest in high-tech gadgets to facilitate their heist. But for David Beckham, Hollywood fiction became a reality when in April 2006 criminals used a simple laptop and RFID scanner to crack the electronic door locks of his BMW X5. Once the locks were cracked they then fired up the ignition and drove away – gone in just 15 minutes!

So how was this possible? After all the RFID industry has gone to considerable lengths to reassure us that 'contactless' chips and 'smart keys' are 100% secure, and not vulnerable to 'skimming'. John Holl, a journalist with Forbes Autos throws some light on the matter saying,

"…Back in 2004, when keyless technology was still new and touted as unbreakable and secure, Dr. Aviel D. Rubin, a professor of computer science at Johns Hopkins University, examined this possibility (with his students). Within three months they had successfully cracked the code embedded within the ignition keys of newer model cars, theoretically allowing them to steal the autos." "It was a trial-and-error process," Rubin said. *"We wanted to see if it could be broken and found out that (surprisingly) it could!"*

The technique requires a laptop, an RFID scanner and software capable of probing for encryption weaknesses. It only takes about 15 minutes for the software to explore millions of possible encryption answers, before finding the one that fits with the vehicle's unique identity.

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The thieves then submit an identical code to the vehicle, which allows them to 'boost' it.

15 minutes – it's not long. About the time it takes to park up, leave your vehicle and order at a restaurant, which seems to be what happened to the Beckhams.

And it just goes to show that no security system is 100% fool-proof, however peace of mind may soon arrive as British company RFID Protect hopes to manufacture RFID shielding sleeves that are specifically designed to protect a vehicle's 'smart key' against unauthorised probing.

Author: From an article by Jon Holl for Forbes Autos
Original source: www.contactless.wordpress.com
Date: 05 January 2011

Case Study # 11:

Nokia 6131 - how 'smart' is this?

The Nokia 6131 is just another mobile phone, right? Wrong, because whilst it looks much like a regular mobile phone, inside there's an integrated RFID chip allowing for full 'contactless' capability.

Using Near Field Communication (NFC) technology housed within, this so-called *'smart phone'* is also a *'wave to pay'* device. All users need do is wave their Nokia 6131 across a 'contactless' reader to make a payment at participating retailers.

Michael Kwan of Mobile Magazine has reviewed this product and explains, *"...the chip stores all of your personal financial information allowing for instant payment."*

Kwan continues, speculating that, *"...if you thought someone stealing your contact list and reading your text messages was bad enough, wait until they start making random purchases with your phone too."*

Whilst it seems unlikely that Nokia would issue a system that was anything less than 100% secure, some have asked an interesting question. Quite simply, *"... how secure can it be when your phone is in someone else's hands? Especially when there is no signature or PIN required for purchases."*

Author: This short case study references an original publication by Michael Kwan
Original source: Mobile Magazine
Date: 23 November, 2007 | www.mobilemag.com

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Case Study # 12:

The future of passenger transport.

We are at the dawn of a global rollout; mass electronic ticketing systems for passenger transport! Ahead is a 'contactless' future for public transport, whilst falling into the distance are the old systems of paper and magnetic ticketing.

Netherlands based Gemalto, a world leader in digital security, has been pioneering 'contactless' ticketing for mass transport systems for a decade, and has already supplied in excess of 100 million 'contactless' cards.

Some of the countries who are now widely deploying 'contactless' / 'e-ticketing' include: UK | France | Chile | Mexico | USA | China | and Sweden

'E-ticketing' systems aim to bring convenience to passengers through ease of payment and the ability to switch between different modes of public transportation by using interoperable tickets. Some pilot projects also enable passengers to pay for fares using their mobile phones.

The UK bus pass system has started to introduce 'contactless' cards to those entitled to free or reduced travel concessions. However, there have been recent reports of vulnerabilities within 'contactless' fare payment systems.

Whilst it would be wrong to suggest that 'contactless' payment cards are vulnerable to unauthorised 'skimming', the industry has not yet been presented firm evidence that 'contactless' technology is 100% secure.

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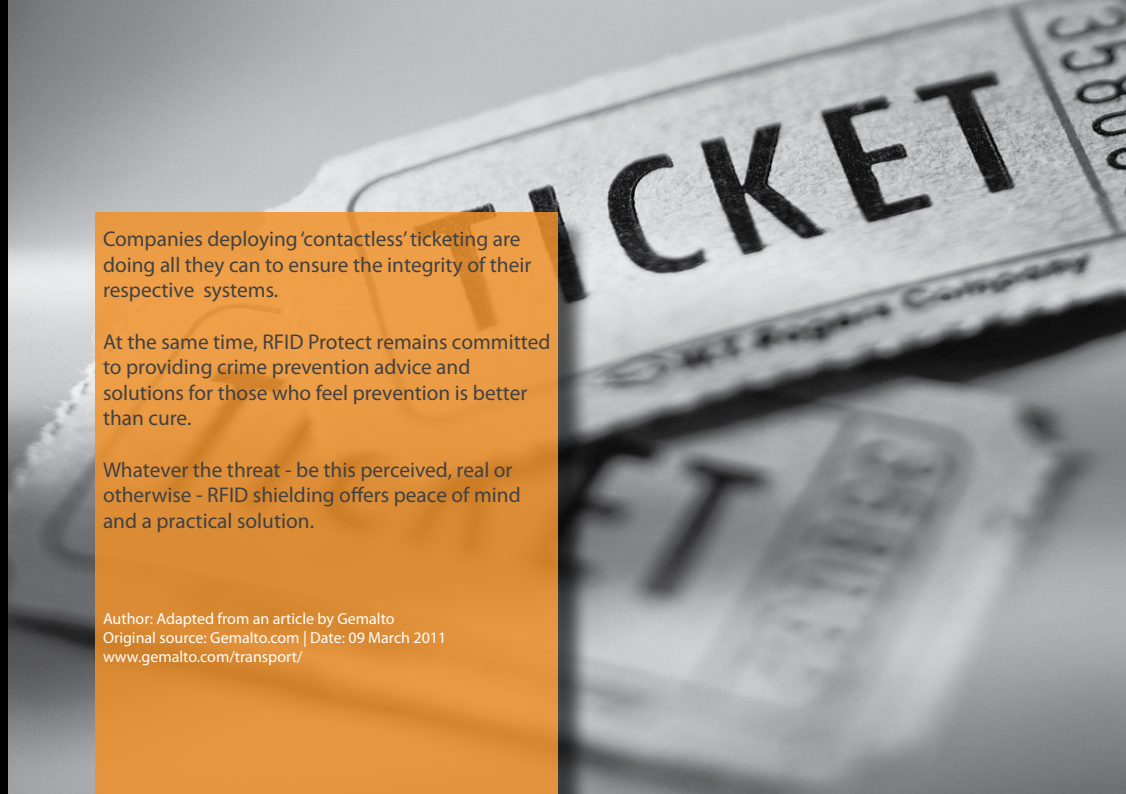

Companies deploying 'contactless' ticketing are doing all they can to ensure the integrity of their respective systems.

At the same time, RFID Protect remains committed to providing crime prevention advice and solutions for those who feel prevention is better than cure.

Whatever the threat - be this perceived, real or otherwise - RFID shielding offers peace of mind and a practical solution.

Author: Adapted from an article by Gemalto
Original source: Gemalto.com | Date: 09 March 2011
www.gemalto.com/transport/

Contacting us

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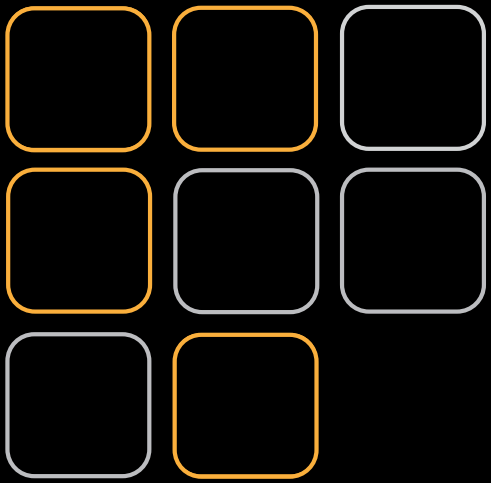

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