

On a hot Iraq day, platoon commander Brian Chontosh led his Marines toward ad Diwaniya.

e felt the relentless pressure of helmet, body armor and gear as he sat in the right front seat of a dust covered Hummer. Monotony exploded into a deafening roar of zooming RPG explosions, chattering machine guns and popping AK-47s. The Marines faced another complex ambush.

Chontosh barked out instructions while his driver circumnavigated traffic. They came under fire from an entrenched machine gun position and drove straight at it. The young Marine manning the .50 machine gun in the vehicle's turret poured fire into the enemy positions. Chontosh ordered the driver to take the vehicle into the trench line.

The platoon commander bailed out of the Hummer and engaged the first AK-47 bearing man in line. He fired until his M16 ceased feeding ammunition. He transitioned to the 9 mm Beretta pistol that Marines are saddled with and resumed his assault. He picked up an AK-47 and continued his rampage until forced to

transition to another AK-47 to kill more attackers.

Another attacking Marine passed Chontosh a discarded RPG. The platoon commander thumbed the hammer down and pressured the trigger unleashing a rocket and shredding another cluster of insurgents. Ultimately, Chontosh's offensive cleared more than 200 meters of trench, killed more than 20 enemy and lead the way to breaking the ambush.

In November 2008, a mere continued on next page



BY: DR. BRANDEN R. WILLIAMS

I like to joke that I do my Christmas shopping all year long, but the reality is, I'm usually scrambling in December for a few last minute items.

'm entering into a string of gift giving occasions that starts with Christmas and ends with Mother's Day, where it is my job to make sure that my wife knows how lucky I am to have her.

Many of us have someone in our lives who is difficult to buy for, be it the guy who has everything or someone who is extra special in our life. If they happen to be security or privacy conscious, I have a few ideas for gifts for those folks.

WALLET PROTECTION

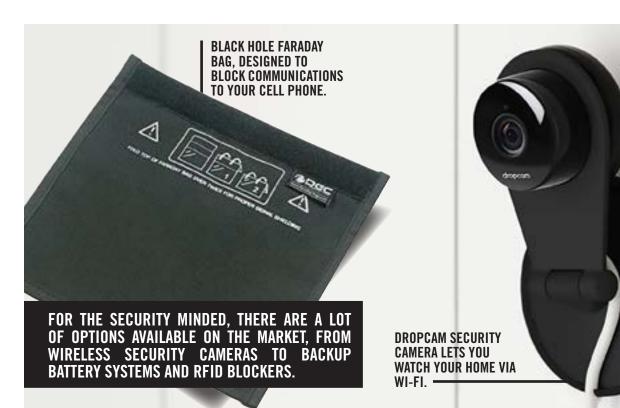
Frictionless payments is a buzz-phrase popular among payment professionals. Studies of human behavior have led product makers in the space to find all kinds of creative ways to remove steps that buyers have to go through to pay for goods and services. You might even say that they are consciously removing all the mental gates that might cause someone

to think about a purchase so they can get to the "buyers remorse" stage as quickly as possible. Banks are constantly competing for you to choose their card first—so called, "top of wallet" choice—because they make money every time you purchase something. As new products become available, banks will invest in putting these products to use in their portfolio so that you will hopefully prefer the easiest method to check out.

Two big examples of this that you might use today are the Radio Frequency Identification (RFID) chips that sit inside of some plastic payment cards and of course, the Apple Pays and Samsung Pays of the world. Several years ago, some of the payment networks licensed technology that leverages the EMV standard (the same standard that drives that fancy chip you now are getting in your credit cards) to do contactless payments. Meaning, with the right technology in the card, I can just wave it over the reader and it will transmit the information required to process a transaction. It's incredibly useful, but can be a bit scary as well.

RFID technology is used all over our society today. In its simplest form, circuits are printed with antennas that will energize the electronics when they are near the right kind of signal, no batteries required. If you have ever walked out of a major retailer and one of those alarms starts going off because they think you are stealing something, you have seen RFID technology in action. Other uses include toll passes that you stick on your windshield, the chip inside your passport and some ignition keys in previous generation vehicles that, as an anti-theft mechanism, required the RFID chip to start the car. It's a very useful setup as it is cheap to manufacture and cheap to operate. Unfortunately, the technology is simple to abuse.

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Several years ago, security researchers revealed how easy it was to grab information off RFID chips used in various applications. They took it one step further and demonstrated how to break the weak encryption used in certain applications to protect some of the data. If you search around, you will see examples of broken Exxon Speed Passes, Passports and ignition keys for cars. The attack is getting easier to pull off every day with smaller devices and lower power requirements. So much so, that someone could sit next to you on a train or in a waiting room for less than five seconds, energize any of the cards in your wallet and grab any data that the cards give up. Unlike Apple Pay or Samsung Pay, the RFID chips in your credit cards simply respond to the energized signal and do not require any additional input from you to transmit their information.

It's a little scary, but it is more sensationalized by the news than it probably needs to be.

There are ways to prevent this from happening. What you need are RFID blockers that come in the form of mini-Faraday cages built into sleeves for your cards or even into your wallet itself. Both are readily available from your favorite online retailers. For examples of the wallets, check out ID Stronghold (www.idstronghold.com) who claims to have the original RFID wallet on the market (*Ed: see page 6*). Their product lines include wallets for men and women, as well as sleeves that will work for single cards.

FARADAY BAGS FOR PHONES

In a previous article I mentioned how different organizations, whether they are government sponsored or not, can track your movement via your cell phone by using fake cell phone towers. The only way to ensure that your phone cannot communicate with the outside world is to block the signal using a Faraday bag. Just like with your RFID cards, you can prevent your phones from communicating by wrapping them in a bag laced with a metal filament that prevents signals from passing through. It's called a cage because it is typically in mesh form of some kind. If you have friends who want the ability to disappear off the grid (minus getting pegged on CCTV that is), a Faraday bag for their phone is an easy gift. I found a ton of these on my favorite e-commerce store, so you should have no problem getting one for your loved one.

SECURITY CAMERAS

Twenty years ago, you would truly be labeled as crazy if you outfitted your home with expensive security cameras. Today, it's almost a necessity as we deal with errant mailmen, abusive package delivery services, copper theft from A/C condensers and the occasional burglary situation. Just last year, my father suffered a theft when someone climbed his fence and stole a television off of his back porch. You had better believe he's got cameras covering his property today.

Camera systems come in a couple of different forms, but most require a power source

and have a small battery backup included in the device. Almost all of them have cloud services bundled in that allow you to store images or video securely off site in case you need them. These systems are not cheap. However, there are some systems that work well inside your property that can be quite affordable. For example, DropCam and Canary are two cool products that have become very popular in the last year or so. There are also battery-only camera options, but my personal experience is that the quality and reliability are much lower than a wired version.

DASHBOARD CAMERAS

You don't need to live in Russia to take advantage of dashboard cameras. You can see crazy things happening right here in the USA too. Dashboard cameras have tons of great uses for regular citizens. Accidents happen and they are not always your fault. Imagine if you had a visual record of an accident that either happened to you or to a car near you. Some individuals believe they can scam insurance companies by stopping on a road, putting the car into reverse and backing up until they hit you. More adventurous individuals try jumping on to your car and bashing their head against your windshield to make it look like you hit them. Dashboard cameras have foiled several such scams. Again, check your nearest search engine for some shocking videos.

These devices are merely for your protection, to create a visual record of things that happened while driving. Don't forget that it

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THERE ARE NUMEROUS DASHBOARD CAMS AVAILABLE, SUCH AS THIS DISCREET ONE MADE BY I-MAX.

could also be used the other way around if the right parties discover that it is present and recording.

BUG OUT BAGS WITH POWER

If you don't have a basic Bug Out Bag built and ready to go, you are going to be scrambling in the event that you need to get out of a situation quickly and have some self sufficiency for a few days. Common items include survival gear, first aid kits, cash, nourishment and water. Most of us hope that we never have to use the bag, but we enjoy the peace of mind we get from knowing it is there in case of an emergency. In the same way that you change the batteries in your smoke detectors when you change your clocks, you should also take a look at the elements of a Bug Out Bag and make sure they are still current and relevant. For example, if you do not have a way to charge a cell phone or tablet in your Bug Out Bag, you might be out in the field with a dead phone. Even in a time of crisis, a phone can provide lots of tools including GPS tracking, light and text messaging; often the only way you can get comms in and out of a disaster area. Portable batteries are getting better and more powerful with every year. Consider one of the many bags with integrated power solutions or consider buying just the power pack.

ADDITIONAL READING:

For more information on how interchange (how parties that process credit cards make money) works check your local search engine (such as DuckDuckGo.com, a search engine that doesn't track you) for "how interchange works" to see who makes money on different parts of a payment card transaction. The bank name printed on the card makes the most and it's often paid for exclusively by the place where you used it to pay for your goods and services.

To learn about some fun attacks on RFID and payment cards, check out this blog at http://j.mp/OiVSGw for more info. ✓

BIO

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