



## Steve's Computer Tip #110

### From Plastic to Smartphone: What is Digital Wallet and When will it Take Over?

A **digital wallet** refers to an electronic device that allows an individual to make electronic commerce transactions. This can include purchasing items on-line with a computer or using a smartphone to purchase something at a store. Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder's credentials. An individual's bank account can also be linked to the digital wallet. They might also have their driver's license, health card, loyalty card(s) and other ID documents stored on the phone. The credentials can be passed to a merchant's terminal wirelessly via near field communication (NFC). Certain sources are speculating that these smartphone "digital wallets" will eventually replace physical wallets. The system has already gained popularity in Japan.

#### The Technology is Here — For Some Phones at Some Businesses

Contactless payment terminals have been gradually rolling out for use with newer credit cards. These cards have a chip in them that can be tapped against the terminal to pay — the terminal and credit card communicate wirelessly. MasterCard PayPass and Visa payWave work in this way. A smartphone can communicate with the terminal in the same manner. Both MasterCard and Visa have licensed their services to Google Wallet, allowing Google Wallet to function with a PayPass or payWave terminal just as a card would. Google's Nexus 4 and Galaxy Nexus ship with Google Wallet in the USA, so they're ready to be used for contactless payments in places where the terminals are installed. Many Android phones, Windows phones, and even BlackBerry phones — but not iPhones — have NFC technology inside them. They could theoretically be used for contactless smartphone payments today.

#### It Won't Work Everywhere

Of course, while such technologies are widely available, they don't work everywhere. In reality, you would also need to carry around your credit card and swipe it in magnetic-strip scanners that don't support such contactless payments. Of course, even credit cards aren't accepted anywhere — some businesses still insist on cash. We won't be able to leave our credit cards and wallets at home anytime soon. Faced with the reality of having to carry around a credit card anyway, many people opt to forgo smartphone payments even at the few stores they're available and even if they have a phone supporting it. It's an additional service to use.

#### Competing Standards

Just as credit card companies get a percentage cut of transactions today, there's a lot of potential money in digital wallet services once they take off. Various companies have been jockeying for position as they attempt to launch their own services. Google Wallet has received a cold reception from US carriers, who are dead-set on launching their own digital wallet platform, known as Isis. In fact, Verizon blocks Google Wallet on its network. Isis was announced in 2010 and is now active in several test markets (cities), but hasn't yet rolled out widely. Isis is a joint

project between AT&T, T-Mobile, and Verizon Wireless, who all want to include Isis with their phones and receive a cut of the digital wallet payments. Visa and MasterCard want to push their own digital wallet services — V.me and PayPass Wallet — for the same reasons. These are just a few of the many companies jockeying for position — PayPal, American Express, and other players are all involved. Apple has sat this battle out so far, not even including NFC technology in their iPhones. Considering the wide variety of competing standards and the inability of the popular iPhone to function as a digital wallet — at least with current NFC-enabled terminals — it's no surprise that digital wallets haven't yet taken the world by storm.

### **Banishing Plastic Cards**

You can certainly use digital wallet services today — Google Wallet is the most prominent option, although it only works in the USA. However, you'll need one of a few supported phones, and you'll still need to bring your credit card with you for when you inevitably run into a payment terminal that doesn't support NFC. All the jockeying for places in the marketplace and delays in launches for services like Isis have prevented digital wallets from really taking off. Because the technology only works with some phones at some stores, and plastic credit cards work almost anywhere, even without your phone, it's a tough sell.