

A Consultant's View

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Anonymous Digital Currency?

After the Feds shut down a couple of trading hubs, Bitcoin was public in how it was not an anonymous currency. That raises the question, "Can we have an anonymous digital currency?" The short answer is "no", but it helps to look at why. The main reason is counterfeiting.

Throughout human history, we have had barter, coins, or some kind of currency. With currency, when someone slipped you an envelope of cash, there was no way to track that transaction. The transaction was anonymous. However, the currency was never anonymous.

Currency is something that both parties to the transaction agree has more value than the medium of transfer. With public currency, there is some authority that stands behind every currency guaranteeing that it has not been adulterated or counterfeited. If you look at a dollar bill, each bill has a unique serial number. The paper is worthless without the full weight and credit of the US government behind it. Without an authority backing up a currency, the currency is back to being a barter object and has only the reuse value. For example, a lot of old Mexican coins were used by Navaho jewelry smiths to make jewelry.

Digital currency is only a set of bits and can be copied. That set of bits has very little value outside of what an authority can give it. The only way that an authority can guarantee a set of bits is to track every use of those bits and show that the set has not already been

used by that person. Without that history, there is no way for a third party to know if the digital currency has been counterfeited or not. Bitcoin uses a peer to peer network authority instead of single node authority.

It is possible to map Bitcoin history and trace who used that Bitcoin. UCSD Researchers have traced many through a marketplace used for illegal drugs.

The same value problem happens in works of art. The value of a Masterpiece is partly the raw aesthetic beauty and partly the name of who made it. If a piece thought to be by Rembrandt is determined to be by a student, the value plummets. Sometimes, the value of a painting exists only

because some authority states that this work is by that artist and the history of who owned the piece is vital to maintaining that value.

What about gift cards? The cards themselves have very little value. The value is in the merchant honoring the electronic message stating how much value the card has. Gift cards can be anonymously traded because of the physical card. And, yes, counterfeiting can be a problem with gift cards. Most systems do not have a problem with counterfeiting as the amounts on the cards are small and the cards are limited to specific merchants (limiting the appeal for the counterfeiter).

So, to have a digital currency, we have to have some authority stating that the bits in question have value. That means that we can not have anonymous currency in the digital world.

Authority Gives a Bill A Value

Body Clock and Career

Are you a morning person or an evening person? This is not an idle question. Our industrial society assumes that everyone is the same. However, study after study is showing that there are significant differences between morning people and evening people.

One study (University of Alberta) showed differences in the time of day where the muscles were strongest and when nerves would respond to stimuli. For example, the nervous system of morning people was the most responsive at 9 AM while that of evening people was most responsive at 9 PM.

People are spread around as to when they are most productive. About a quarter of the people are evening people and it is not just habit. Our sleep depends not just on alarm clocks and coffee, but also on a set of genes. One study found that a group of evening people had a slightly different circadian clock gene.

Most people are "mid morning" people even if they had been active in evening for a while. These people are able to adjust their habits to become morning people. The quarter of the population who are true evening people and the smaller group who are extreme evening people have very difficult times adapting to a morning requirement.

People who are true evening people often gravitate to careers that fit that life style.

These studies show that if you want to have a staff that is active early in the morning, it helps to screen for that when hiring.

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Risky World

In the arms race between making systems secure and breaking into them, the "tamper proof" chips have been attacked by milling the back of the chip to a tiny layer and then using a laser microscope and infrared camera to track where things were happening. The researchers could then insert probes into the circuit.

Prairie Trail Software, Inc



3821 Beaumont Lane
Plano, TX 75023

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