

# Bitcoin's evolving e-commerce and security in the cloud environment essay sample

[Law](#), [Security](#)



Bitcoin, a digital currency that utilizes P2P technology, and functions with no central authority has become a global intermediary in the e-commerce arena. BitPay through Bitcoin has helped a staggering 10, 000 merchants across the world accept payments. In North America 50% of the merchants use BitPay, 25% from the EU as well as countless others internationally. Merchants using the payment service provider makeup over 90% of the ecommerce businesses, and blogging platforms such as WordPress are among BitPay clients. Bill Gates calls this innovation a “ technological tour de force.”

The BitPay service consist of various tools called Bitcoin wallets designed to conduct and transact with other users. With apps for Android, Windows, Max, and Linux, owners are able to send, receive and check their balance with a click of a button. Unfortunately numerous exchanges through this technologic service suffered security breaches and to this day Bitcoin still does not offer adequate insurance as a bank can. Furthermore, a two-factor authentication is recommended for added security and a new a Bitcoin initiative called the Bitcoin payment message (BPM) specification will start in June 2014. The Business problem(s)

The problem is security. Though Bitcoin transactions are more secure than various e-commerce ventures; Bitcoin is attempting to produce more user friendly applications, opening the door to hacker advantages. Concerns stem from enthusiastically produced addresses that can come from computers compromised by an attacker, who could eventually change that address to one they will govern. This carries some significant drawbacks. Mike Hearn a

core contributor to Bitcoin states, " Addresses " lead to privacy leaks, they are inflexible and tough to extend with new features, they aren't authenticated and they're one-way only."

The organization has numerous customer complaints stemming from an unresponsive network, not being user friendly, and security glitches leaving the consumer uncomfortable about their transactions. The Bitcoin system currently requires all outputs to become exhausted through conducting transaction inputs. These outputs cannot prompt the exact amount leaving the need for a change addresses for the remainder of the function.

Functionality must be simplified which will bring customer satisfaction and more profits. The approach must connect with customer service issues and producing simple applications that connect society's daily lifestyle. High-level Solution

Currently each time a customer is conducting an e-commerce transaction the merchant generates an exclusive payment address recorded by a global network of computers associated with the customer's order. The great aspect of Bitpay is that there are so many Bitcoin addresses and they a post to a public register, the probabilities of replicating one are tremendously small. A torturous Bitcoin address is copied by the consumer into their wallet with a code or certificate. After the consumer authorizes the payment in their wallet, the Bitcoin network receives the information for verification. When the server identifies payment, the consumer waits for additional conformation from the network to include balance. Regrettably, most consumers never receive the last message and certificates hold no added

security. For a smoother, user friendly approach with improved security; Bitcoin addresses must become human-readable addresses. Payment received messages are also important for consumers to feel confident about their transaction. Benefits of Solving the Problem

As Bitcoin matures investors continue to pour in. Investors clearly see BitPay as a light, away from government scrutiny and taxation. The company in May 2014 received 2 million from the Founders Fund (five partners who were founders of early investor companies such as Facebook, PayPal, Napster, and Palantir Technologies). Interviewed by Olga Kharif, Chris Dixon co-founder of BitAngels said, “ The technology can potentially eliminate fees, which pay for the cost of accounting systems, banking services and verification of account holders.” He also stated, “ By eliminating most of those expenses, financial services such as escrows and dispute resolution based on the Internet of Money could represent a significant business opportunity, he said in an interview.”

If Bitcoin technology succeeds the virtual currency could cut the fees of financial tasks currently handled by middlemen in this 1. 22 trillion global e-commerce marketplace as well in cloud undertakings. For most skeptics Bitcoin is a fad which will dissolve within a few years. The ultimate grip of big government (China, US, Germany) regulations is closing in as financial institutions and corporations are losing money from the technology's popularity. In the US, the IRS considers Bitcoin as property, not currency and ruled in 2014 that all owners will be taxed accordingly. European countries

(Germany, UK) have taken up the same stance regarding ownership but clearly no overall consensus has been reached worldwide.

### Business/Technical Approach

Bitcoin has the capability to present extra functionality to their consumers, but also a great deal of additional complexity. For the organization executing a multi-signature which is a multi-step process, as multiple clients utilized this action differently; this can constrict proficiency. A standardized method should be adopted that will allow developers to adopt compatible protocols while remaining connected with the user-base centered on client selection. The Bitcoin system currently requires all outputs to become exhausted through conducting transaction inputs. These outputs cannot prompt the exact amount leaving the need for a change addresses for the remainder of the function. Functionality must be simplified which will bring customer satisfaction and more profits. Business process changes

Today, when industries across the world speak of technology that can change financial processing, Bitcoin is part of the conversation. With its rising number of retailers and an increase in value, this crypto-currency still is not holding a huge precedence in the currency exchange process in most people lives. By Bitcoin refusing to secure a better processing structure, various organizations have presented means to connect with the common worker. Currently there is a large amount of people without access to some form of financial services, which some analysis called the global unbanked. Bitcoin presses that they are in the process of creating better security platform but it may be too late, as technology is ever-changing. In a world

where credit scores control 2.7 billion people, some cannot grasp financial freedom. Without the best scores, many cannot open a bank account, establish a business, or transfer funds to family.

This pulls from Bitcoin's user pool and extinguishes the technological growth of the currency. InVenture an organization created present a new standardization for credit scoring has opened the doors of opportunity most people in economic turmoil. The user text daily expenditures and sales to the organization that are accumulate into a formula. This procedure in turn presents a score pleasing to lenders. Financial institutions for years have lost money considerably due to a faulty credit scoring system disconnected from the populace. Another new process system which is constructed to replace the common bank system is Simple. The business presents complimentary ATM withdrawals, free tagging, tools for checking your balance, classifying purchases, and depositing checks through your phone. The company also works with InVenture and both hold a position for a digital currency to incorporate their ambitions. This is a great opportunity for Bitcoin venture into new waters creating a new system; one that involves new currency, banking, and credit scoring.

Technology or Business Practices used to Augment the Solution Bitcoin transactions are measured as anonymous because there are no ties connecting companies or individuals to the accounts during transactions. Nevertheless, account numbers are posted by some individuals' online allowing authorities to connect identities. Bitcoin evangelists think identifying users will take away from Bitcoin's authenticity and value sparking augments

of civil war between founders. As the government closes in on the organizations freelance workings, numerous computer analysis form statistical techniques to identify accounts. This comes into play as co-founder and CEO Charlie Shrem of BitInstant was arrested recently on money laundering charges. These unexpected events could become harmful to Bitcoins value and future government backed fiat currencies begin to pour in.

In 2014, New York District Attorney Cyrus Vance Jr. stated, " The greatest concern about digital currencies among law enforcement was anonymity; in a Bitcoin transaction, all transactions are essentially conducted between e-addresses that lack any kind of user identification." Regardless, the Security Exchange Commission (SEC) is considering legitimizing Bitcoin but to what degree of regulation is not known. The SEC may not have a choice as the upper limit of Bitcoin is 21 million and growing at a tremendous velocity. Other augments that play a role in Bitcoins tension from governmental bodies connect to the music industry.

Bitcoin enthusiasts compare the perils of Bitcoin startups to what early-stage music streaming platforms faced with lawsuits from record labels. If Bitcoin startups are permissibly scrutiny from financial regulators in this matter; the organization could be crippled before if had an ability to flourish. A light touch from the SEC could secure the success of Bitcoin but one of the conditions will be better security processing transactions for its users. Most young companies resist placing funds back into the organization, for Bitcoin

obtaining the necessary technology for security is essential. Conclusions and Overall Recommendations

Some technological corporations sell hardware and software; others sell a service. Bitcoin has the opportunity sell technology solutions that will transform the world as we know it. By focusing on the overall financial system designed for debt and control the precedence is for change. There are various organizations, InVenture and Simple created to modify infrastructure norms that hinder the economy. Bitcoin must connect with these resources and build on the demand for global balance. This organization can become valuable if they maintain the supply of fiat government currencies. In such unpredictable times, if Bitcoin continues to avoid change, their price structure can plummet. As producers respond by decreasing manufacturing, a spiral in underemployed human capital may result. In a year various organizations may choose to abandon Bitcoin all together. High-level implementation plan

Bitcoin must become ready for a large scale adoption plan as numerous countries and organizations are determined to root out the old financial structure. In March 2014, Bitcoins exchange rate hit its highest point in two years at over \$1200; grabbing every tech investor worldwide. Even throughout their recent scandal and the neglect from consumer outreach concerns investors continue to pour in. For the most part there reasons are unclear. Some may see a structure fresh to innovated ideas with new leadership, since the dismissal and arrest of CEO, Charlie Shem. Others may look to profit from the price fluctuations as seen from this year's exchange



rate. Currently, the Australians fund like its various counterparts, Europe and the United States are the newest of big-money investors hunting for profits in the digital currency sector.

This is the type of opportunity Bitcoin must embrace and build on. A venture capital firm for Australia, (Future Capital) has declared a \$30M Future Capital Bitcoin Fund, dedicated to investing in companies in the digital currency. The leading fund manager for the Australian firm, Mr. Carosa states: We view the emerging Bitcoin ecosystem as an investment opportunity that has transformative potential across a raft of social, technology-based and cultural applications and we see great scope for the broader adoption of Bitcoin and its related applications to redefine the global payment status quo. As seen from Bitcoins large peak of in 2011, investing due to price fluctuations is a gamble and is no way the proper way of determining a company's value. Investing for such reasons as the infrastructure of the technology and digital currency sector is the future.

Figure 2. Bitcoin to USD exchange rate on the Mt. Gox exchange through October 22, 2011.

### Summary of project

This project elaborates on the background of a young company, Bitcoin and its novel digital currency, becoming a major player in the micropayment arena, and virtual world commerce markets. The paper also discusses the organizations struggle for legitimacy and hatred by governments forged to old financial infrastructures. Furthermore, by the organization and users

being decentralized and anonymous, Bitcoin is almost impossible to shut down. As the old saying goes, “ you can mine for gold or you can sell pick-axes.” It is clear that Bitcoin observed an opportunity in pick-axe sales, allegorically connecting to the supply aspects of the treasure hunters.

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