



JUST PAY

White Paper

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History

The concept of decentralized digital currency, as well as alternative applications like property registries, has been around for decades. The anonymous e-cash protocols of the 1980s and the 1990s were mostly reliant on a cryptographic primitive known as Chaumian Blinding. Chaumian Blinding provided these new currencies with high degrees of privacy, but their underlying protocols largely failed to gain traction because of their reliance on a centralized intermediary. In 1998, Wei Dai's b-money became the first proposal to introduce the idea of creating money through solving computational puzzles as well as decentralized consensus, but the proposal was scant on details as to how decentralized consensus could actually be implemented. In 2005, Hal Finney introduced a concept of reusable proofs of work, a system which uses ideas from b-money together with Adam Back's computationally difficult Hashcash puzzles to create a concept for a cryptocurrency, but once again fell short of the ideal by relying on trusted computing as a backend. In 2009, a decentralized currency was for the first time implemented in practice by Satoshi Nakamoto, combining established primitives for managing ownership through public key cryptography with a consensus algorithm for keeping track of who owns coins, known as "proof of work."

The mechanism behind proof of work was a breakthrough because it simultaneously solved two problems. First, it provided a simple and moderately effective consensus algorithm, allowing nodes in the network to collectively agree on a set of updates to the state of the Bitcoin ledger. Second, it provided a mechanism for allowing free entry into the consensus process, solving the political problem of deciding who gets to influence the consensus, while simultaneously preventing Sybil attacks. It does this by substituting a formal barrier to participation, such as the requirement to be registered as a unique entity on a particular list, with an economic barrier - the weight of a single node in the consensus voting process is directly proportional to the computing power that the node brings. Since then, an alternative approach has been proposed called *proof of stake*, calculating the

weight of a node as being proportional to its currency holdings and not its computational resources. The discussion concerning the relative merits of the two approaches is beyond the scope of this paper but it should be noted that both approaches can be used to serve as the backbone of a cryptocurrency.

EVOLUTION OF OTHER PAYMENT METHODS

The traditional payment methods appear out dated in the modern times. There was a need of some alternative to the traditional methods of payments and transactions. Then came the term crypto currency. Crypto currencies have gained lot of fame in the past few years. But what is the reason behind the immense success of this new technology in the economic market. There are numerous advantages of crypto currencies over the traditional methods some of which include:

Fraud: Individuals cryptocurrencies are digital and cannot be counterfeited or reversed arbitrarily by the sender, as with credit card charge-backs.

Immediate Settlement: Purchasing real property typically involves some third parties (Lawyers, Notary), delays, and payment of fees. In many ways, the bitcoin/cryptocurrency blockchain is like a “large property rights database,” says Gallippi. Bitcoin contracts can be designed and enforced to eliminate or add third party approvals, reference external facts, or be completed at a future date or time for a fraction of the expense and time required to complete traditional asset transfers.

Lower Fees: There aren't usually transaction fees for cryptocurrency exchanges because the miners are compensated by the network (Side note: This is the case for now). Even though there's no bitcoin/cryptocurrency transaction fee, many expect that most users will engage a third-party service, such as Coinbase, creating and maintaining their bitcoin wallets. These services act like Paypal does for cash or credit card users, providing the online exchange system for bitcoin, and as such, they're likely to charge fees. It's interesting to note that Paypal does not accept or transfer bitcoins.

Identity Theft: When you give your credit card to a merchant, you give him or her access to your full credit line, even if the transaction is for

a small amount. Credit cards operate on a “pull” basis, where the store initiates the payment and pulls the designated amount from your account. Cryptocurrency uses a “push” mechanism that allows the cryptocurrency holder to send exactly what he or she wants to the merchant or recipient with no further information.

Access to Everyone: There are approximately 2.2 billion individuals with access to the Internet or mobile phones who don’t currently have access to traditional exchange, these people are primed for the Cryptocurrency market. Kenya’s M-PESA system, a mobile phone-based money transfer, and microfinancing service recently announced a bitcoin device, with one in three Kenyans now owning a bitcoin wallet. (Let me repeat that again. 1/3)

Decentralization: A global network of computers use blockchain technology to jointly manage the database that records Bitcoin transactions. That is, Bitcoin is managed by its network, and not any one central authority. Decentralization means the network operates on a user-to-user (or peer-to-peer) basis. The forms of mass collaboration this makes possible are just beginning to be investigated.

Recognition at universal level: Since cryptocurrency is not bound by the exchange rates, interest rates, transactions charges or other charges of any country; therefore it can be used at an international level without experiencing any problems. This, in turn, saves lots of time as well as money on the part of any business which is otherwise spent in transferring money from one country to the other. Cryptocurrency operates at the universal level and hence makes transactions quite easy.

There is no other electronic cash system in which your account isn’t owned by someone else.

Take PayPal, for example: if the company decides for some reason that your account has been misused, it has the power to freeze all of the assets held in the account, without consulting you.

It is then up to you to jump through whatever hoops are necessary to get it cleared, so that you can access your funds. With cryptocurrency, you own the private key and the corresponding public key that makes up your cryptocurrency address. No one can take that away from you (unless you lose it yourself, or host it with a web-based wallet service that loses it for you).

Overall, cryptocurrencies have a long way to go before they can replace credit cards and traditional currencies as a tool for global commerce.

Fact is, many people are still unaware of cryptocurrency aka Digital Currency. People need to be educated about it to be able to apply it to their lives. Businesses need to start accepting it They need to make it easier to sign up and get started.

The future appeal of cryptocurrencies lies in allowing you ultimate control over your money, with fast secure global transactions, and lower transaction fees when compared to all existing currencies.

When used properly and fully understood it would be the initiator of many emerging systems that will fundamentally change our global economic system.

THE TECHNOLOGY

Unlike other crypto currencies, Just Pay Coin is based on green mining PoS technology. If you have been exposed into the crypto community for a while, then you would have heard of PoS (Proof-of-Stake). It is a mining concept available to some of the traded coins, which bases the coins you mine depending on the amount of coins you possess, meaning a person who owns 1,000 coins would mine more than a person with 10 coins regardless of their computing power. Some people would welcome this concept, while some would shun away from it as they continue to be skeptics; but as coins like Ethereum (ETH) are starting to warm up to PoS, there must be some advantages to this type of mining, but what could they be? From what I can gather, these are some fundamental benefits for PoS.

Resource

This is perhaps the most obvious advantage of PoS. As PoW uses massive amounts of computing power, it also comes with a huge toll on the electricity bill, not to mention the deterioration of your mining computer. I would say, thousands of heavily powered computers around the world would have a huge green house effect. With PoS, you would be able to stake using something as simple as a Raspberry Pi (USD 35), which only uses a very small amount of electricity would enable you to stake more coins compared to a super computer. That's assuming you have more coins staking on your Raspberry Pi. The effects are especially visible for countries with high electricity costs. For people worried about large electricity bills and global warming issues, this is the obvious choice.

Price Volatility

As you know, the miners serve as nodes who guard the ledger and confirm transactions, which in turn enables them to earn coins by solving hashes in the blockchain. It is up to the miner to decide

whether to keep or sell the earned coin. As mining is expensive as mentioned above, you can't blame miners for selling the coins they earn. The problem is, if there's not much demand for a coin, this pushes the price down. As some miners would sell, the other holders would get jittery and... you get the point. Perfect example of this is the anon coin, ZCash, which plunged the price by a fraction of what it already is (around USD 35) as miners would automatically just sell all coins to the highest bidder. Speaking of anon coins, if you compare anon coins like ZEC, XMR and SDC (SDC being the only PoS), you can find which coin is the most stable.

The reason why a PoS would give you price stability is because it gives the person more incentive to keep the coin than to sell. If a miner could make more coins using the coin that he mined from, he would think twice before selling.

Decentralization

The reason why PoW is so popular is because this is what Bitcoin has introduced. This has provided the global community with a decentralized form of currency. People imagine their humble computers would serve as nodes keeping all the transactions safe. However, as entities like China have invested a few billion dollars worth of supercomputers with the sole purpose of mining bitcoins, enabling them to mine a huge chunk (I would say around 80% of all mined coins). Isn't that in a way, a centralized currency?

PoS would minimize that possibility as it would provide tons of risks for China or any other entity planning a buy-out. Would a staker sell his principal coin to anyone if he's guaranteed a certain cashflow? Within that scenario, stakers would realize that the longer you hold, the more expensive your coins would get.

Security

Of course, there are both upside and downside in terms of PoS and PoW security, but the most important part of securing a coin is arguably by protecting its blockchain.

Compromising a blockchain involves inserting incorrect information into the data where the whole decentralized system would accept; in order to do that, you would need a large amount influence. When we talk about influence, PoW and PoS would classify them differently. PoW is measured by computing power, where PoS uses coin ownership.

If a malicious Super PC (the billion dollar PC China already has) would want to compromise a competing coin, he only needs to stop mining on his coin for a few hours and target the coin. That way, a competing coin would lose credibility and investors would just opt to buy their coin. For PoS, you would have to own a large amount of coins. A large enough amount to be able to land an impact into the ledger, which would be very expensive.

What is the blockchain?

A blockchain or distributed ledger is new way of storing and transferring information. Centralised databases have been employed for many years by financial corporations and other organisations to store customer details and record transactions of one kind or another. These are carefully-guarded and closed systems in which only privileged operators are allowed to make entries. When a customer transfers money from one bank account to another, they make a request to the bank to do so on their behalf rather than engaging directly with the database that holds information about balances. Centralisation is inherent in the paradigm. This carries certain implications. A centralised system is one that by definition has a point of failure. It is also one that implies a power differential because the privileged operators have the prerogative to intervene - for example, by unilaterally reversing a transaction or imposing new charges. The blockchain offers a radically different approach. The Bitcoin protocol, launched in 2009, established for the first time the viability of transferring value on a peer-to-peer basis over the internet, without the need for a trusted intermediary. Satoshi Nakamoto, the pseudonymous creator of Bitcoin, solved the 'double spend' problem: the issue that digital information can easily be copied, and therefore a centralised authority was previously required to reflect where funds were located. At its simplest, the blockchain is a digital record stored on a network of computers around the world. Instead of securing information by restricting access, the blockchain shares information amongst all users. Ownership of funds (for example) is cryptographically verified, and the full transparency and mutual ownership of the system means that a bad actor is immediately recognisable as such and any transactions submitted by such a node are ignored. The decentralised structure of the blockchain brings several key features in contrast to traditional centralised approaches:

- Transparency: it is possible for anyone to track the movement of funds from one account to another.

- Immutability: once confirmed, a transaction cannot be reversed. No one can interfere with a completed transfer.
- Low cost: transaction fees are minimal.
- Cross-border: funds can be sent as easily to someone on the other side of the world as they can to someone in the next room.
- Speed: due to the flat and transparent nature of the blockchain, transfers show up almost instantly and are typically confirmed in minutes, rather than hours or days.

ADVANTAGES OF JUST PAY COIN

Anonymous and Private

Just Pay Coin transactions are completely anonymous and private. Unlike in payments through bank, where the transactions can be tracked and identified, Just Pay Coin transactions cannot be identified. A person can only know the addresses of Just Pay Coins on which the payment has been sent and received. But to whom these addresses belong cannot be identified. It's like payment to a particular bank account can be tracked but to whom these accounts belong cannot be known. (but if a person uses same Just Pay Coin address for every transaction for a long period of time, there is possibility that the person can be tracked)

Payment Freedom

Paying through Just Pay Coins provide us utmost freedom. Just Pay Coins can be sent to any person in any part of the world. No intermediaries in between. No bank holidays/strikes. No boundaries or borders. No payment limit.

Low/Minimal Fees

Paying through Just Pay Coin has very low and sometimes no transaction fees at all. It all depends on the priority of the person. If a person wishes that his/her transaction get's processed fast, he has to pay a transaction fees which is still very low as compared to any financial intermediary or digital wallets.

Fewer risks for merchants

Just Pay Coin transactions are secure, irreversible, and does not contain any customers' sensitive or personal information. This protects merchants from losses caused by fraud or fraudulent chargebacks.

It's fast

Just Pay Coin transactions are very fast if compared to banking channels. A Just Pay Coin transaction is as fast as an e-mail and can be processed within 10 minutes. Also it can be instantly processed if they are “zero-confirmation” transactions, meaning that the merchant takes on the risk of accepting a transaction that hasn't yet been confirmed by the Just Pay Coin blockchain. The confirmed transactions are those which take 10 minutes to process. Credit Card or digital wallet services also provide instant approved transactions services but for this the merchants providing the services usually charge hefty fees for it, which is not the case of Just Pay Coin as mentioned above too. Just Pay Coin has very low transaction fees even for being super fast in terms of processing.

HOW IS JUST PAY COIN DIFFERENT

Just Pay coin is based on the much advanced Proof of Stake technology unlike the earlier crypto currencies which were based on the old Proof of Work technology. In cryptocurrencies, proof-of-work is a system that uses hard-to-compute but easy-to-verify functions to limit exploitation of cryptocurrency mining. It allows for miners to independently try to find the next block, and once they do that miner transmits the solution they found throughout the network. Now, the rest of the network is now being told that the solution for the next block is X, but they don't have to do all of the work that the miner did – they just need to perform a single check that proves the miner did in fact do the work, and the block it found is in fact legitimate.

With PoS, the rich get richer. The more coins you have, the higher stake you have, meaning bigger rewards. Someone's chance of getting a block depends on how much stake they have so in order for someone to get more than 50% of the forging power ("forging" is the process by which new blocks are made just like "mining" but the exact method in PoS is different so it was given a different name), they would need to control more than 50% of the coins in existence.

When you become a "forger", you "lock away" a portion (or all) of your coins and begin staking.

Since PoW uses up a lot of electricity (and it's not cheap sometimes – In 2015, it was estimated that one Bitcoin transaction required the amount of electricity needed to power up 1.57 American households per day), it fixed this issue by attributing "mining power" to the proportion of coins held by a miner. This way, instead of utilizing energy to answer PoW puzzles, a PoS miner is limited to mining a percentage of transactions that is reflective of his or her ownership stake. For instance, a miner who owns 3% of the Bitcoin available can theoretically mine only 3% of the blocks.

JUST PAY COIN AND TRANSACTIONS

Just Pay coin is the currency of the future. It is different from other crypto currencies as it is based on green mining PoS technology. PoS is a highly advanced technology compared to the PoW technology on most of the crypto currencies. To sum it up, let's see in detail how Just Pay coin actually revolutionizes your transactions and payments :

Better Security

Unlike traditional payments, like cash and credit cards, cryptocurrencies are digital and encrypted; you cannot be ripped off in a transaction like you can be with legacy payment systems, and it is much harder to steal Just Pay Coin compared to a wallet full cash. In a world where so many of our transactions are online, and our savings and credit rating are at stake at all times, anything that provides increased transactional security is a plus. And there is currently no transaction mechanism that is currently more safe and secure than those that use Just Pay Coin.

Cut Out the Middleman

Another great benefit of using Just Pay Coin, especially when purchasing real property, is that digital currency can help eliminate expensive brokers, lawyers, and other typical "middlemen" who inevitably raise the costs of already expensive transactions. Just Pay Coin can essentially act like "a large property rights database".

Access to Everyone in Every Market

As more people, including billions of people in the developing world, increasingly use mobile devices linked to the Internet to conduct financial transactions, Just Pay Coin is truly going to come into its own. All Just Pay Coin is designed for low cost, no-fee transactions, so undoubtedly these digital currencies will become increasingly popular as more people have access to mobile devices to conduct financial

transactions. In the late 1990s and early 2000s, mobile phone technology spread rapidly through the developing world, and saturated markets where standard landline telephones had never been established; Just Pay Coin is poised to do the same exact thing.

Universal Recognition

If you do business globally, or travel frequently, you are often exposed to exchange rate risk; that is, the transaction can be affected by currency exchange rates. You may also be subject to fees associated with exchanging one currency for another, or find challenges in exchanging currency altogether. Fortunately, with cryptocurrencies like Bitcoin, that is a non-issue, as the digital currency is universally recognized at a given value. This helps to save time in determining a price for a transaction, as well as any fees associated with exchanging money from one form to another. As Just Pay Coin is increasingly adopted around the world, it is going to make financial transactions faster and simpler, which is a great thing for everyone involved.

You Are in the Driver's Seat

One of the best things about Just Pay Coin is that, unlike virtually any other type of money retaining system (save for a wall safe or your wallet) you totally own it. Think about it: most traditional liquid asset systems – banks, credit unions, brokerage houses, or even high tech ones like PayPal – take control of your funds and leave you subject to their terms of service. If they decide that you have violated those terms, they can suspend your account. They can change their terms of service, and cause you to have to pay more or receive fewer funds for important transactions. With Just Pay Coin, you retain all of the funds on hand, so to speak, digitally, with no third party involvement; the only one who can change the terms of your Just Pay Coin use is YOU.

JUST PAY COIN WALLETS

Using Just Pay Coins is very easy and user friendly task. Just Pay coins can be used for all your payment related needs in a very easy way. All you have to do is pick a wallet depending upon your operating system in your computer machine or cell phone and install the Just Pay coin wallet, which is available for almost all platforms, on your compatible device. The wallets are designed in a way that they provide the best customer experience without hampering the ease.

Some of the platforms on which the Just Pay Coin Wallet is available include:

- Android
- iOS
- Windows
- Linux

The wallet is available for the above listed most commonly used operating systems. Using the wallet, you can easily fulfil all your payment and transaction needs at blazing fast speeds, under high security and complete privacy at very low prices.

DISCLAIMER

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CONCLUSION

If what is believed to be the future of crypto currencies comes to pass, the governments of the world and their associated financial institutions will have no choice but to create, support and circulate crypto-currency, such as Bitcoin, as legal currency alternatives at some point in the future.

In the future, there will be no need to have a government or central bank to make decisions on currencies. Just Pay Coin will revolutionize the 21st Century economy and how financial transactions are carried out. Just Pay Coin is money that is produced by people, to be used by the people and it originates from agreements between the same people. Just as local currencies came to the forefront of finance as the natural next step in the evolution from barter trade, in the future, we can expect to trade in digital money without having to worry about banks, interest rates, the printing or minting process, and any other fees and processes which have become a general part of today's banking systems.

You don't send any personal information when transacting in Just Pay Coin. On the other hand, when dealing with paper money, your account number along with your ID number, social security information, balance, and address are transferred between banks and systems. You can only HOPE that your information remains safe. The transactions pass through a clearing house where several people have access to your most sensitive data. For this reason, approximately 5% of US residents have had their identity stolen at least once in their lives. In a Just Pay Coin-driven future, identity theft will be consigned to history.

There are many more benefits of Just Pay Coin than can fit into a single article. While it is not the perfect solution to all the world's monetary problems, its benefits far outweigh the challenges this currency has to overcome. The convenience and security it offers will mean that more

and more individuals, businesses and governments will have little choice but to adopt Just Pay Coin in one form or another.