Dingocoin: Realizing the Satoshi vision

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Abstract. Dingocoin is a cryptocurrency made for effortless payments, that holds sacred the original Satoshi vision of decentralized payments. Bitcoin has been immensely successful. The Satoshi vision of a peer to peer electronic cash system remains elusive, owing to prohibitive cost and usability barriers to widespread adoption of decentralized payments. As a result, actual use of cryptocurrency increasingly relies on centralized institutions, and is susceptible to the very same weaknesses as fiat money. Dingocoin has taken a step back, built standing on the shoulders of giants. It is designed to be useful as peer to peer electronic cash for decentralized payments, based on the wisdom from actual adoption of cryptocurrency, as well as the mass adoption of mobile payment apps. Dingocoin is nearing one million users as it approaches its 3rd anniversary in April 2024. Like its ancestor Bitcoin, it is built based on the belief that a great idea will spread organically

1. Introduction

As was the case at the time of the original Bitcoin paper, commerce on the Internet still relies almost exclusively on financial institutions serving as trusted third parties to process electronic payments, and transaction costs still hinder innovation. The leading players VISA and Mastercard process around 20,000 transactions per second across traditional Point of Sales and ecommerce, with significant associated costs for merchants and consumers.

Traditional payments have been disrupted by mobile payment apps, not by cryptocurrencies like Bitcoin. There has been a massive adoption of innovative mobile payment apps which start to disrupt incumbent financial institutions, and a beginning adoption of innovative peer-to-peer payment apps. In total, they process far more payments volume and payments value than card companies including VISA and Mastercard. Still, these payments rely on centralized financial institutions as well as central bank settlement that is expensive and slow, and have the same third party and settlement risks as was the case before.

Adoption is also significantly hindered as fiat currencies are limited geographically. China is the only market for the two largest players, with more than 500 million users each: AliPay and WeChat Pay. India is an exclusive home to two of the leading players, with more than 300 million users each: Paytm and PhonePe. Across the rest of the world, four players have surpassed 100 million users: Apple Pay, Google Pay, Paypal and Samsung Pay. In some markets, local peer to peer-focused payments apps have transformed countries to cashless societies, for example Poland (Blik) and Sweden (Swish).

At the same time, more than 300 million people have become owners of cryptocurrency. However, they don't use them for decentralized payments: Up to 90% has never moved their cryptocurrency outside of the centralized exchange where they initially acquired it. More than 10,000 new cryptocurrencies and tokens have been launched just in recent years, of which more than 90% are issued and controlled by individuals and organizations and not decentralized at all. The most successful mobile payments app focusing on cryptocurrency (CashApp) is centralized, and the most successful mobile apps for cryptocurrency (Binance and Coinbase) are centralized and focused on trading and storage. Custodial cryptocurrency means either unregulated, centralized finance or cost-intensive regulatory oversight due to custody of client funds, exactly like for financial institutions. Adoption of cryptocurrency for decentralized payments is hindered by prohibitive cost and usability barriers – less than 0.1% of payments are made using decentralized cryptocurrency, mostly with stablecoins guaranteed by a centralized institution such as Tether or Circle, some with large value transfers of Bitcoin, and almost none with small payments.

The potential of cryptocurrency to disrupt significant niches within traditional payments and peer-to-peer payments is obvious: it should be cheaper, faster, more secure and truly global in comparison to fiat currency payments. Decentralized blockchains can be cheaper and faster than central banks and financial instutitions, third party risk can be eliminated, and cryptocurrencies that are recognized globally are superior to domestic fiat currency for cross-border payments. Beyond disruption, 50% of adults globally do not have an account with a financial instutition, and cryptocurrency has the potential to bank the unbanked.

What is needed is adoption of user-friendly mobile payment apps that support decentralized payments and cryptocurrencies that are actually cheaper, faster, more secure and truly global.

2. Mobile payment apps ideal for decentralized payments

As billions are using mobile apps for payments, the brilliance of blockchain for decentralized payments is yet to become available. Broad adoption of cryptocurrency for payments requires ease of transacting, abstraction of the technical complexity of cryptocurrency and selection of the most suitable cryptocurrencies for payments.

There are about 30 mobile apps in existence with more than a million users that in theory support decentralized payments (non-custodial wallets). Almost none of them focus on payments, and usage is very limited. About 20 of them promote their own centralized token project, distracting from the core use case. In practice, it is hard for normal users to use these apps for payments, it is hard to understand the associated costs, and most cryptocurrencies supported by these apps are designed for specific use cases and technologically unsuited for payments due to prohibitive usability constraints, high transaction costs, slow transaction execution, third party risk or lack of familiarity.

There are mobile app developers that look for ideal cryptocurrencies for decentralized payments, and that focus on building an ideal user experience for decentralized payments enabling true ease of use, for example by allowing users to effortlessly send decentralized payments using identifiers such as social media accounts or phone numbers. We believe these mobile apps can disrupt significant niches within traditional payments and peer-to-peer payments.

What is needed from an ideal cryptocurrency for decentralized payments in a mobile app is a technical design that does not cause usability constraints, enables low transaction costs and fast transaction execution, ensures blockchain security and has familiarity, both now and in the future. To enable significant scale, high transaction capacity in the future is also required. Very few, if any, cryptocurrencies today meet all of these criteria, making it difficult to design a mobile payment apps ideal for decentralized payments.

3. Limitations in existing cryptocurrencies

Bitcoin was created to enable frictionless payments with decentralized money. But it is not easy to use as a means of payment – at the core, it takes too long to confirm transactions, on-chain transactions are too expensive, and avoiding on-chain transactions by relying on second layer solutions or 3rd parties (centralization) is also expensive. This has hindered adoption, and has also led to development of centralized institutions and centralized cryptocurrencies that were never part of the original Satoshi vision, and that, quite frankly, are worse alternatives to the existing financial sector.

Enter Ethereum and smart token platforms. We have nothing against tokens as crypto-assets (except for that they are mostly useless), but they are not suitable for small payments. Tokens are not technically simple, leading to challenges in implementing simple to use solutions: as they are implemented as contracts on blockchains outside of their control, they require the user having access to the native coin as well as strict control of the receiving wallet network. Non-custodial apps have to send all transactions on-chain to secure low costs, to avoid custody of customer funds and reduce regulatory pressure. For Ethereum, the average cost of sending a token, such as SHIB, on-chain is $6 as the time of writing (sending the native token, Ethereum, is slightly cheaper, with a recent average of $3 on-chain). Successful ecosystems, like Ethereum, cause the on-chain transaction fees to skyrocket, and while some willingly paid $70 at some time to mint a monkey NFT, no-one will willingly pay that fee for a payment. Tokens issued on other, less successful token platforms such as BSC, Tron or Polygon can be sent cheaper, but prices are also volatile and increasing, and successful platforms with a variety of use cases with higher value per transaction than small payments will inevitably lead to higher costs. Furthermore, tokens are not trustworthy as a real-life currency, as they are in the end centralized (a token is minted by a single party and distributed, there is no fair process of mining). It is possible to design non-custodial wallets that improve the user experience for cryptocurrency payments even with these shortcomings, but it is a tradeoff that has not, so far, resulted in good solutions with real-life adoption for payments.

There is a small number of cryptocurrencies that are better suited for decentralized payments than Bitcoin and tokens on token platforms. The known non-token cryptocurrencies that currently have sufficient blockchain security and sufficiently low costs to support decentralized payments are Dogecoin, Litecoin, Bitcoin Cash, Ethereum Classic, Monero, Kaspa, Bitcoin SV, Zcash, Digibyte and Dingocoin. Coins with slow transaction speed (e.g. Bitcoin Cash for which a transaction frequently takes more than 30 minutes to execute) are not usable for payments use case, and coins with privacy technology (e.g. Monero) make it extremely hard to offer a sufficiently good user experience for a mobile app. Furthermore, coins with limited transaction capacity (e.g. Dogecoin, which theoretically supports 33 transactions per second, however in practise would be too expensive at 10-15 transactions per second) are also not aligned with a significant adoption for decentralized payments. Finally, in order to facilitate global payments, familiarity is important and hard to achieve cost-effectively.

4. The ideal cryptocurrency for decentralized payments

Dingocoin is an attempt to find a new direction, and to unlock the enormous productivity gains inherent in being able to transfer value without friction, and without relying on a centralized organization. Dingocoin can support a billion users and beyond with its well-designed blockchain technology. As argued above, no other cryptocurrencies are equally suitable for mobile payments.

As Dingocoin is approaching its 3rd anniversary in April 2024, it is already changing the landscape as nearly one million users own Dingocoin non-custodially, making millions of transactions, driven by the adoption of non-custodial mobile payment apps partnering with Dingocoin. We want to tell the world about our innovation. A million can easily and without friction transfer their crypto to others, without relying on 3rd party exchanges or custodial wallet providers.

Dingocoin is a decentralized, Proof of Work cryptocurrency, launched fairly and announced openly, and open to innovation within the Dingocoin blockchain. Secure, decentralized blockchains are hard to build. Due to the economics of securing blockchains, it is extremely hard to start a new, truly decentralized blockchain in a world where there is already so much capital deployed to mine or secure blockchains. Dingocoin chose the path found by Dogecoin, by allowing miners of Litecoin to receive Dingocoin for free in exchange for providing their blockchain security (hashpower) to secure Dingocoin. In the same way as Dogecoin, this has allowed Dingocoin to become one of the most secure blockchains in the world. Emission inflation is low relative to comparable recent cryptocurrencies, currently at below 5% annually and decreasing.

Dingocoin has consciously built a blockchain that does not cause usability constraints due to its technical implementation (no technical adaptation to specific use case, no contract platform capabilities, 60-second target block confirmations, no privacy features etc.). It is worth to mention that UTXO-based blockchains such as Bitcoin and Dingocoin are very different from account-based blockchains such as Ethereum, which presents a specific set of usability challenges. Dingocoin has chosen to guide its partners in developing solutions that provide a great user experience, overcoming these challenges in a unique way by supporting instant pending transaction confirmations, instant balance updates and other innovative solutions (where potential attacks are not in any way economical for small transactions and a one-minute wait is well worth it for larger transactions).

Dingocoin is currently one of the most active decentralized blockchains, with millions of transactions executed. The deployment of a planned update allows for an increase in transaction capacity, in order to accommodate for the expected growth of usage in the coming years. Dingocoin is a true child of Dogecoin, supporting a theoretical maximum of 33 transactions per second currently. By shortening block time and allowing for an increase in block size, Dingocoin plans to expand its capacity to 660 transactions per second, which will allow for more than 1% of all global payments to be made using the Dingocoin network, as well as secure very low transaction costs and even faster transaction execution in the future.

To function well for cross-border payments, which is an important niche as cryptocurrencies have an inherent advantage versus fiat money, easy recognition is key. Dingocoin has chosen the path of memecoins, which involves building a strong community that can easily grow and easily gain recognition.

5. Conclusion

The future of payments lies in decentralized systems, and Dingocoin helps realize that future. Dingocoin is hopeful for a brighter future for the broader cryptocurrency universe, a future in which the core function of inexpensive transfer of value is solved also in practise, making money and payments easier for us all – and finally realizing the original Satoshi vision of decentralized payments.