

Cash2: Cash Version 2

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Abstract. Cash2 is a new cryptocurrency that retains all the useful properties of cash but is also digital, decentralized, borderless, and non-inflationary. This is an attempt to create the next evolution in cash.

Introduction

Cash has many properties that make it an ideal form of money. It is hard to counterfeit, divisible, durable, and fungible. Cash payments are also private and irreversible.

The biggest problem with the current financial system is the ability of a centralized authority to print unlimited amounts of money. In other words, cash loses value at a rate determined by a select few with power over the majority. Creating an evolution in cash has to involve removing these centralized institutions.

Bitcoin introduced a novel way to send a digital currency without the need for a central authority [1]. It seems Bitcoin would be a perfect replacement for cash. However, Bitcoin in its current state does not have many of the useful properties of cash needed to become mainstream money.

Bitcoin vs. Cash

Cash has three properties that make it a better form of money than Bitcoin: fast transactions, zero fees, and fungibility.

Fast Transactions: Bitcoin transactions take on average 10 minutes to be processed.

Transaction Fees: Bitcoin originally had zero or near zero transaction fees. However, as more people used Bitcoin, the number of transactions quickly outpaced the network's processing capabilities. In 2017, Bitcoin transaction fees were as high as \$50.

Fungibility: Fungibility is the property that every unit is equal to every other unit. Bitcoin is not fungible because the transaction history of every bitcoin is openly recorded on a public ledger. Bitcoins with a history of illicit activity involvement are considered to be worth less due to the risk of being blacklisted by exchanges.

Cash2 vs. Bitcoin

In this section, we discuss how Cash2 incorporates the three beneficial properties of cash that are missing in Bitcoin.

Fast Transactions: Cash2 has an average block time of 9 seconds. Usability studies have shown that 10 seconds is the upper limit for keeping a user waiting for a task to complete [2]. Therefore, waiting more than 10 seconds for a transaction to be processed negatively impacts the user's experience.

Low Transaction Fees: Cash2 has a limitless, adaptable block size and zero transaction fees.

Fungibility: Cash2 is part of the CryptoNote family of cryptocurrencies. The sender and receiver of every transaction are hidden, making transactions difficult to trace.

Technical Specifications

Maximum Supply	15,000,000
Transaction Fee	0
Smallest Unit	0.000000001
Block Time	9 seconds
Hashing Algorithm	BLAKE2b

Cash2 Limitations

Blockchain Size: Cash2's dynamic block size, fast block times, and privacy features could lead to a large blockchain size. Assuming Cash2 handles the same amount of traffic as Bitcoin, the Cash2 blockchain could be 10 to 100 times larger than that of Bitcoin's. However, we believe advancements in computing and networking technology will keep up and even outpace these storage requirements.

Privacy: There are limits to the level of privacy possible with Cash2. If privacy is of utmost importance to the user, we recommend using a privacy-focused cryptocurrency and to not use Cash2. Cash2 should not be considered a privacy coin.

Orphaned blocks: Fast block times leads to more orphaned blocks.

Fair Launch

The Cash2 blockchain will be launched on December 5, 2018 at 9:00 am EST. There will be no premine, and everyone has an equal opportunity to mine, buy, and sell Cash2.

Conclusion

Cash2 aims to become mainstream digital cash used for day-to-day transactions.

References

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- [3] C. Decker and R. Wattenhofer, "Information propagation in the Bitcoin network," in P2P (IEEE, 2013).