Light Paper 01

PLENTEUM

Transaction Fees... Eat Our Dust!

PLENTEUM

Abstract

Plenteum is a cryptocurrency with the primary objective of replacing enforced transaction fees with a "DustFund" to sustain the long-term viability of the blockchain by creating a sustainable mining reward fund.

Through this, we provide more control over the future viability of the network to our community members.

Coin Info

- Website: www.plenteum.com
- Mining Algo: Cryptonight Lite Variant 1
- 120 second block time
- 21,000,000,000 total supply after emission
- 2.5% premine (525,000,000)
- 1,020,000,000 current circulating supply (mid-December 2018)
- Exchanges:

  https://app.stex.com

  https://www.fcbaccount.com

What is Plenteum?

Plenteum is a Cryptonote-based cryptocurrency and blockchain network that was launched in mid-2018.

Cryptonote-based coins are established in the cryptocurrency space with many successful implementations such as Monero, Electroneum, Aeon, etc.

Cryptonote-based coins are CPU and GPU minable coins and can be implemented with a number of "proof of work" algorithms, some of which are ASIC resistant.

This ASIC resistance was an important part of why we chose Cryptonote as our basis for Plenteum, as this allows every day users to participate in our network on several levels without having to buy specialist equipment or hold large amounts of our coin.

Since we are a community-focussed project aiming to provide more influence over the future viability of the network to our community, we believe that everyday users should be able to participate in all aspects of the network.

Why did we create Plenteum?

Before we get into the details of why we created Plenteum, it's important to first understand a few fundamentals of "proof of work" based cryptocurrency networks as they stand today.

- Current implementations rely on charging the end user a fee to process transactions on the network.
- The reason fees exist in the first instance is to be able to provide rewards to miners for mining on that network.
- Once a coin has emitted its total supply (the maximum amount of coins that can be in circulation), the sustainability of the network becomes heavily dependent on these fees being enough to keep miners incentivized to continue mining on that network.
- Fees are based on the physical (or byte) size of a transaction, not the actual monetary amount.
- Fees earned per block mined are exclusively determined by the size and total number of transactions included in the mined block.

Due to the way transactions work behind the scenes, dust gets created in the blockchain and users' wallets.

For more information on what dust is, see:
https://en.bitcoinwiki.org/wiki/Cryptocurrency_dust

We created Plenteum to introduce a new concept that aims to solve two fundamental problems:

1. Dust clogging up wallets and slowing down transaction throughput on the blockchain.
2. Fees being too expensive for users or not enough for miners' incentive to sustain the blockchain into the future.

This is done by implementing a new feature called the "DustFund".

When Plenteum enters its tail emission phase (when it's nearing its total supply in circulation and base rewards are lower), the DustFund will supply the mining rewards instead of fees.

So, how does it work?

Fees are not mandatory on our network.
Any transaction can be sent completely free of charge (although users may opt to pay a fee in order to increase their transaction priority).

When a transaction is sent, the outgoing dust is extracted and redirected to the DustFund.

Should the user elect to pay a fee, a portion of this fee will also contribute to the DustFund with the balance paid to the miner to allow for faster throughputs of those transactions.

Plenteum uses a system of 8 decimal places, only 2 of which are usable or visible in a user's wallet. From a usability perspective, this is more in line with what people are used to. The remaining 6 decimal places (e.g. 0.00######) is the dust. The maximum amount of PLE extracted per transaction is 0.00999999, but will vary per transaction based on the selected inputs and resulting "fused" outputs. Any amount less than 0.01 that is being sent will be extracted to the DustFund.

Block rewards will be more consistent for miners, as they will be based on the available funds in the DustFund and not of the available fees within a single block. This allows miners to more accurately predict their earnings from mining PLE when the DustFund is paying out.

As mentioned, there are no enforced fee levels, lowering entry barriers. Transaction size (in terms of bytes) is no longer a consideration for the average user, and does not impact the ability to transact on the network, and the blockchain itself is left lighter and, therefore, capable of handling more volume in transaction numbers.

Ultimately, this approach leaves the future of the blockchain and the value of the currency entirely in the users / participants hands as the implementation decisions of the development team have less of an impact as adoption grows.

How does this help the longevity of the blockchain?

As we previously mentioned, most current blockchains rely on fees (in combination with emission rewards). This is potentially problematic as there's uncertainty whether the fees will be enough to sustain the incentive to mine or whether they will become too expensive for users.

The current "system" requires a fine balancing act and with Bitcoin, a single transaction can already cost in the region of $20 USD!

Plenteum's solution is to accumulate the dust amounts left over from Unspent Transaction Outputs, and use this to build up a DustFund over time. The more transactions there are on the blockchain, the quicker this fund will grow. Sustainability is, therefore, fundamentally based on usage.

One significant difference with fee-only based implementations is that the DustFund will pay more consistently per block to miners as its emission will be based on average over time rather than fees accumulated within the current block being mined.

This allows miners to more accurately predict their returns and not mine purely based on the hope that transaction fees will cover the cost of mining and be profitable.

What's in a name?

The name Plenteum refers to being plentiful.

This is related to the ultimate longevity and sustainability of the blockchain and has nothing to do with the ultimate capped money supply of 21 billion units of Plenteum.

Where to from here?

The development roadmap for the foreseeable future is available on our website, www.plenteum.com.

Beyond what is listed in the website roadmap, we will be determining future direction based on community feedback and participation.

As we indicated, one of the key outcomes of the solution we are implementing is that it gives more control over the future of the coin to the community. It's this community-driven approach we want to build upon to determine future direction as we don't presume to know what the community's needs will be years from now.