Quantum Coin

Blockchain Allocation

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Introduction

Doge Protocol token was launched on September 1, 2021, on the Ethereum blockchain. Quantum Coin will be one of the first, if not the first Proof-of-Stake (PoS) blockchain to be Quantum Resistant, with support for smart contracts. Quantum Resistance improves security, the PoS model provides improvements on energy usage compared to Proof-of-Work (PoW) blockchains and smart contracts provide essential functionality to the blockchain.

This whitepaper details important information about the Quantum Coin blockchain's multi-fork and decentralization characteristics.

Decentralization

A good amount of decentralization is essential to enable wide adoption, build trust and improve the long-term availability of blockchains. A good question to ask will be, a few decades from now, which of the current blockchains will survive.

Bitcoin has proved to be a long-term survivor in this aspect (more than 12 years), surviving against all odds with a wide decentralized community. Even though PoW mining has essentially made it centralized in a way, it is also decentralized in that anyone can join a mining pool to become part of the network. Wide adoption and long-term survival are also indicative of better decentralization.

The below table shows the adoption of three of the most popular and oldest blockchains. The actual number of holders of these blockchain coins will be higher by many orders of magnitude since many hold their coins in centralized exchanges.

Blockchain	Statistic	Count*
Bitcoin	Nonzero balance addresses	38 million
Ethereum	Nonzero balance addresses	60 million
DogeCoin	$1 or above balance addresses	3.4 million

*As of Q3 2021 (see appendix 2,3)

Improving the Major blockchains

Bitcoin, Ethereum and Dogecoin use cryptography schemes that are vulnerable to quantum computers in various ways [5]. These blockchains also use proof-of-work consensus which uses a great amount of energy to mint new blocks. These

blockchains need to be secured from quantum computers while also making them energy efficient.

Quantum Coin Multi Fork

Quantum Coin will be a combined multi-fork of Bitcoin, Ethereum and Dogecoin. In other words, the Quantum Coin blockchain will be formed by forking all these three blockchains together. More details on the fork process are covered in a later section. By multi-forking and using quantum-resistant crypto schemes, the three blockchains are mitigated from quantum computer threats [5]. At the same time, this also enables wide adoption and builds upon the years of trust placed on these three popular blockchains.

Thus, when mainnet releases, Quantum Coin would be the largest blockchain because of this multi-fork. Since this is a fork, holders of coins of these three blockchains do not have to give up their Bitcoin, Ethereum or Dogecoins to get Quantum Coin blockchain coins.

The following chart details how the Quantum Coin blockchain will be, after the multi-fork. As we see in the below chart, the Quantum Coin blockchain will comprise of a multi-fork wherein 15% of the coins are assigned to forks (each) of Bitcoin, Ethereum, Dogecoin and DogeP tokens.

Quantum Coin Blockchain

- DogeP Tokens, 15%
- Bitcoin, 15%
- Ethereum, 15%
- Doge Coin, 15%
- Network Enablers*, 40%
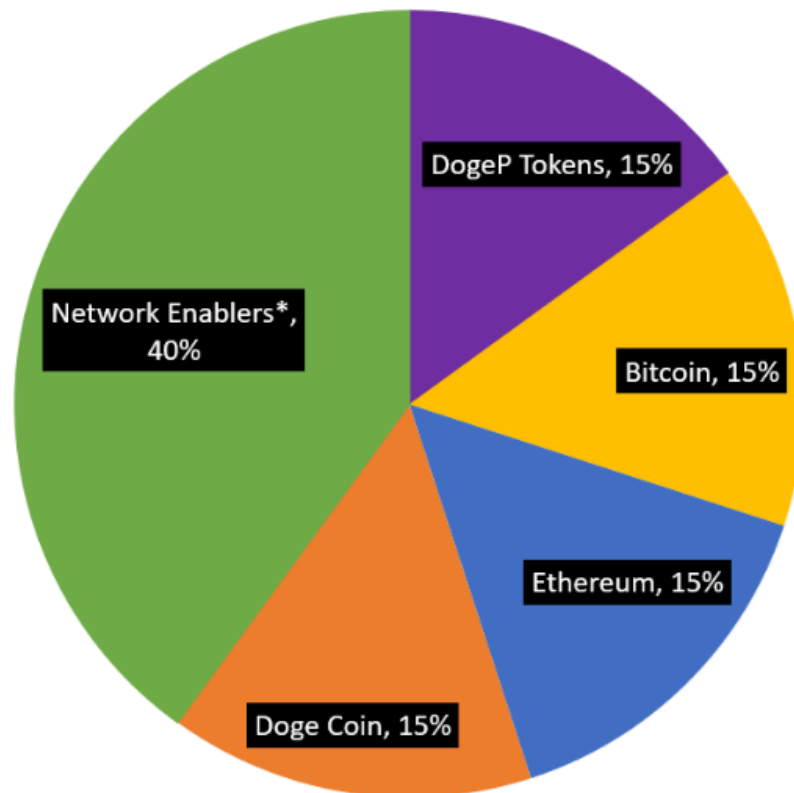
*Network Enablers are block producers, validators, miners, data availability providers etc.

Doge Protocol Token

A question might arise as to why Doge Protocol tokens are a part of this multi-fork. Any Proof-of-Stake blockchain will need a set of validators to sign transactions. In this case, the multi-fork transactions must be signed by a set of validators, after which the three blockchains are forked to form the Quantum Coin blockchain. After the multi-fork, holders can potentially opt to become validators and sign regular transactions (like send-coin transactions). The threshold required to become a validator will be detailed closer to the mainnet.

Doge Protocol tokens holders can optionally become validators and sign the multi-fork transactions. One may also ask why the holders of the three blockchain coins cannot themselves become validators of the multi-fork process. This is because three of the blockchains that are being multi-forked in a quantum-resistant manner will require an additional validator to perform agnostic

validation. Though the Doge Protocol token itself is in the Ethereum blockchain, to begin with, the multi-fork will include an additional level of security checks in the validator-node clients to enable this agnostic validation. Technical details of the multi-fork will be provided in a separate whitepaper, which will explain how the fork would be created in a quantum-resistant manner.

To find how many Quantum Coins token holders will get, a simple formula is: **0.15 x NumberOfTokens**

For example, if the holder has 100,000,000 Tokens, then the number of coins will be 15,000,000. The above calculations do not include token burn details for simplicity.

Network Enablers

Network enablers are block producers, validators, data availability providers and other parties that are required to keep the blockchain running. Data Availability providers will be covered in detail in a separate whitepaper.

Note that in the future, when green energy becomes very affordable, Quantum Coin may also enable a hybrid model with the PoS+PoW consensus model. Miners will also become Network Enablers at that time. Including the proof-of-work model means that anyone with a computer can join the network, without requiring to hold coins before joining the network, thus improving the decentralization factor (this is more inclusive than a pure proof-of-stake network).

Similar to Bitcoin halvening, the number of coins for network enablers will decrease every 4 years. The following table shows the coins for Network Enablers.

Network Enablers Table

Mainnet Year	Coins
First 4 years	20% (5% each year)
4 to 8 years	10%
8 to 12 years	5%
12 to 16 years	2.5%
16 to 20 years	1.25%

20 to 24 years	0.625%
24 to 28 years	0.3125% and so on…

Multi Fork Details

Technical details of the multi-fork process will be detailed in a follow-up whitepaper, before mainnet.

At a high level, coin holders of Bitcoin, Ethereum, DogeCoin and DogeP token holders will be able to get their coins in the Quantum Coin blockchain by cross-signing a transaction with their existing wallet's key and their new Quantum Resistant key.

Holders do not have to give up their existing Bitcoin or Ethereum or Dogecoin or DogeP tokens to get Quantum Coins. However, this ability will be available only for a limited period since Quantum Computers pose a security threat to the Bitcoin, Ethereum and Dogecoin blockchains. This period is tentatively set as 1-year post mainnet and may change depending on advances in Quantum Computing. Beyond this period, to keep the Quantum Coin blockchain secure from Quantum Computers, this claim will not be allowed.

Many weeks before mainnet, a specific block number (for each blockchain) will be taken as the cut-off point for Bitcoin, Ethereum and Dogecoin blockchains. These block numbers will be widely communicated weeks in advance in a variety of social media and press releases. This advance notice is important to make this multi-fork a fair process. Holders of the coins and DogeP tokens as of those block numbers will be able to get their coins in the Quantum Coin blockchain.

Note that for the Ethereum blockchain, only Ethereum coin and DogeP token holders will be able to get coins in the Quantum Coin blockchain.

Satellite Chains

Satellite Chains are other blockchains of the protocol that support other use cases like audio & video streaming, file storage, key-value systems etc. Not to be confused with "side chains", these satellite chains will be loosely coupled with the main blockchain and expose a different set of capabilities.

DogeP token holders might also potentially be able to use their tokens to get coins or tokens in future satellite chains of Quantum Coin. The block used as the cutoff

point for satellite chains may be different from the cutoff block used for the mainnet. More details on satellite chains are available in the Quantum Coin Vision Paper ([4]).

However, it is not guaranteed that DogeP token holders will be able to get coins or tokens in Satellite Chains, since Quantum Computers threat could mean that Ethereum blockchains might have been compromised by that time (or close to being compromised), hence the gates might have been closed.

Summary

One of the goals of Quantum Coin is to secure Bitcoin, Ethereum and Dogecoin from quantum computer threats. The combined multi-fork of Bitcoin, Ethereum, DogeCoin blockchains and DogeP tokens will secure these blockchains from quantum computer threats.

The Quantum Coin blockchain thus aims to be beneficial to the wider community in many ways while at the same time providing essential functionality like smart contracts, security using Quantum Resistant crypto-schemes and green energy compatibility by using Proof-of-Stake consensus.

This multi-fork is a complex process and technically challenging but with the help & support of the wider crypto community, this initiative can be a resounding success.

Addendum

"Quantum Coin" and "Quantum Coin Community" were previously known under the monikers "Quantum Coin" and "Quantum Coin Community" respectively.

Appendix

1. Bitcoin statistics: https://bitinfocharts.com/top-100-richest-bitcoin-addresses.html
2. Dogecoin statistics: https://bitinfocharts.com/top-100-richest-dogecoin-addresses.html
3. Bitcoin, Ethereum statistics:

   https://insights.glassnode.com/the-week-on-chain-week-35-2021/

4. Quantum Coin Vision Paper:

   https://QuantumCoin.org/whitepapers/Quantum-Coin-Vision-Paper-latest.pdf

5. Quantum Coin Quantum Resistance Paper:

   https://QuantumCoin.org/whitepapers/Quantum-Coin-Blockchain-Quantum-Resistance-Whitepaper.pdf

6. Quantum Coin Consensus Paper:

   https://QuantumCoin.org/whitepapers/Quantum-Coin-Blockchain-Consensus-Whitepaper.pdf

7. Bitcoin Supply on 21 Nov 2021

   https://coinmarketcap.com/currencies/bitcoin/historical-data

8. Ethereum Supply on 21 Nov 2021

   https://coinmarketcap.com/currencies/ethereum/historical-data

9. Bitcoin Supply on 21 Nov 2021

   https://coinmarketcap.com/currencies/dogecoin/historical-data