CryptoEscudo: A Portuguese currency for the digital age

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Abstract: Based on the premise of bitcoin, the goal is to have a peer-to-peer version of currency that allows trade without the intervention of financial institutions. By using a P2P network that validates and confirms the transactions and hashes them in the blockchain the need for a financial institution is overcome.

The CryptoEscudo technology is the same as Litecoin, having smaller timeframes for block creation, and so, decreasing the time needed to confirm transactions, it is not just an instrument for saving & accumulation, it is to be used as a currency for transactions between many different individuals and businesses in Portugal and around the world, both online and offline.

1. Introduction

A decentralized cryptocurrency that everyone can use and create.

CryptoEscudo is a project planned and launched by Portuguese citizens, in which everyone regardless of nationality, gender or race is invited to participate.

The idea is developed from the recent and innovative technological concept of cryptocurrency. A concept that changes everything we know about money: the way we use it, save it, or create it. A concept in which coins are created and used digitally in a decentralized and secure network, based on encryption.

CryptoEscudo has its own blockchain, it is not created or controlled by any banks, government, or companies. It is an encryption-based currency that takes its security from the complex calculations involved in it, being transparent and public to all.

The name of our old currency "escudo" is not intended to represent the desire of returning to the past. It represents a reminder of our path to show us and guide us on a new and better future but also to use a common denominator known to 250 Million people worldwide that speak Portuguese and can relate to "escudo". Ticker symbol is CESC.

Our idea is not political. Our idea is simply a technical solution emerged from the world of the crypto economy. Because we believe that technology can also serve the common good and help fix persistent problems in our country.

2. Transactions

Transactions are made as described by Satoshi in the original bitcoin white paper, transfers of coin are initiated by the owner, the owner digitally signs a hash of the previous transaction and the public key of the next owner. This transaction is then publicly announced, the system of participants come into consensus and the transaction is stored in the blockchain.
The blockchain is unchangeable and the ultimate source of truth to from and where the coins move within wallets.

3. Block Creation and timestamping

Each block is timestamped, the timestamp proves that the data must have existed at the time, each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp reinforcing the ones before it. CryptoEscudo generates a new block every 2 minutes being able to process a higher volume of transactions due to the faster transaction confirmation time.

4. Scrypt algorithm for Proof-of-Work

Proof-of-work is the decentralized consensus mechanism that requires the members of the network to put in effort solving an arbitrary mathematical puzzle to prevent anybody from gaming the system. It is used in the CryptoEscudo context for validating transactions and mining new coins. Unlike bitcoin and like Litecoin, CryptoEscudo makes use of the Scrypt algorithm instead of the SHA-256, this is done in an effort to make it easier for "smaller" miners to join but also to make it harder to perform large-scale custom hardware attacks on the blockchain.

5. Network

The steps to run the network are as follows:
  1) New transactions are broadcast to all nodes.
  2) Each node collects new transactions into a block.
  3) Each node works on finding a difficult proof-of-work for its block.
  4) When a node finds a proof-of-work, it broadcasts the block to all nodes.
  5) Nodes accept the block only if all transactions in it are valid and not already spent.
  6) Nodes express their acceptance of the block by working on creating the next block in the chain, using the hash of the accepted block as the previous hash.

6.   International reach (Goal № 1)

Create an international community of CryptoEscudo users (individuals and businesses). People will be able to either start using CESC as a new form of payment (instead of fiat currency or credit cards) or to use CESC as a new store of value, this will have a progressively positive impact on CryptoEscudo value.

Expectation is that the progressively growing use of CryptoEscudo and everyone's interest around it makes the value grow until it finally reaches the desired nominal value of 1000€ = 1CESC. We think the time frame for this goal is from 5 to 25 years.

7.   Distribution among nationals (Goal № 2)

In an effort for equal wealth distribution and popular adoption, part of the pre-mined total CryptoEscudo will be distributed among Portuguese nationals (about 15 000 000) living in the country or abroad. 15 CESC will be given to each Portuguese person who can prove his/her nationality and has not received them yet according to our records. This is expected to be a long and complex process that shall begin on April 25, 2014, a symbolic date and a national holiday known as the "Freedom Day", when a military coup in Lisbon changed the authoritarian regime into a democracy. We think this progressive distribution to the people will start to develop a growing interest in CryptoEscudo and in its use.

8.   Pay out the country's National debt (Goal № 3)

Achieve within 5 to 25 years a growing nominal value for CryptoEscudo until it reaches, at least, 1000€. Appreciation of CryptoEscudo shall be enough to pay our national public debt, which is about 220 000 000 000 Euros at the time of the inception of the project. This makes our national debt per person greater than 20 000 Euros. CryptoEscudo intends to use the global market's behavior to generate and appreciate the necessary crypto value to put an end to a serious problem that affects us all as a nation. Part of the total CryptoEscudo available in the network will be reserved for this purpose.

9. Pre-mined reserves and its distribution

CryptoEscudo goals makes it the most interesting national cryptocurrency project for the non-national citizens.
This project was designed to create a total of 1 000 000 000 CryptoEscudo (CESC).
45% of this amount is pre-mined, but only a small part is for short term usage/distribution.

Pre-mined coins have 3 specific goals:

- **220 000 000 CESC (220M)**
  Shall be used to pay the Portuguese national debt when 1 CESC reaches the value of 1000€.

  Pre-mined addresses listed below:
  CT5AhqZucvsyDJMbP8NUE7U3ZGJt9qicYe
  Cbee8WJoPPATwmXXUcjYd1XfZAspXDafs9
  CcwjWAWASZ8vRk2Q77F3HjdocejhLr3MdW
  CXn78mD5214wrwpgtpgT2zkMPJxHiKqQtD
  CZbu3LHzPksQivUnzd6V4izPirBKpbCGBN
  CfEs9xruP7PqPNKJzAiRXkja3gzavkSWmz
  CHss398dhutRTHbyWXfsyN161hY5PyJFBU
  CQsm9ingqudJkSCHB2Rn7HtFpTVCHUEvjd
  CUkya84Cg7g61FrPHbThUHoVCVhiNnLpYv
  CePzxY28yAj7TpZdmBkhpeN2c46umDH9Js

- **225 000 000 CESC (225M)**
  Distributed among all Portuguese nationals.
  Starting on April 25, 2014, each Portuguese national will receive 15 CESC after presentation of an ID document.

  Pre-mined addresses listed below:
  CM43AGWsTLViY4XpVjBS5aj9LPqHXJj6z9
  CfFoogfb39jnriaE6jAnq1hYqnqrsvguwa
  CMmJHLRcf6HfRRejQCvg9x8cybYYE5vF7Q
  CVh9CesqGjeaHEsaxMoqqZ1aiyC5ucEYN9
  CLJLkvqfWrFFxXvRUhBJUwnqDjtTuxsAWx
  CMVeqXwYfmjmh9KguxK7qgHcxWT76sKhzW
  CPuxmdmboYHNhfepgxBQBtoC3jjZSCnGJN
  CQ5LpMnTBxi9jtxhG26UhFWkkNRf3Ajyv9
  CVWEvsAKaVkWsJ8vnW1nudbHpKzgEuQP3E
  CRNv2CD4d5qXrtmG9183KQw8gTmfVmYunP

- **5 000 000 CESC (5M)**
  Project execution and support.
  Will be used to promote, develop, and maintain the entire project in every possible way during the following 25 years.

  Pre-mined addresses listed below:
  Cdr5u6Cn3aSzyVenhoPhWAuv4kmvGT37sG
  CKL6sTnFBuRQNTXirWXrEZ9uETibZr3dSB
  CcUdBg96QbX2yNkscQFu3q3CsC1ByqEAbv*
  CJidiHmzk63LcSwamhZnD5MoFvmGQmionN
  CeDDNdu7nTZuMsmrRpNp4mp8rReKFpNkon
  CHBN1od4nCqtAoyNmQAGAnRPGWs89gF19R
  CXq3iFu2MNWac8korNa2YR5itEdGE3mSVV
  CR8jKg88SUJNKxx33VuEo6TAbs6w9aMG6e
  CQEbVh3n8MKQr3rfSJ2sHejAoFFH3GPfxJ
  CXCXn2H9KJtTgMVNQJ8o7danWgxMgrnUNu

  *Initially transferred as:
  10% for use at CNjvBnMq6QVFKeypyDDr369TWLXiKRDehD
  remaining 90 % at CKikXdzqXpAEUjuUPkC27sBhqm6mCe3cZo

  Fully restored by a supporter donation (2015-04-23)
  100 % of the pre-mined address (500 000) is now available at CKikXdzqXpAEUjuUPkC27sBhqm6mCe3cZo

- **550 000 000 CESC (550M)**
  Available on the CryptoEscudo network to be mined during the following 20 years, by anyone who wishes to, regardless of nationality, gender, or race.

10. Conclusion

Cryptocurrencies have the power to influence and can provide mechanisms to a highly developed economic democracy sustained on transparency and reasonable privacy.
The global crypto economy is developing fast, and it represents an important opportunity to develop and boost national economies, many of them still submerged in crisis.

We see in the crypto world and CryptoEscudo, if well planned and largely accepted by citizens, a vehicle that helps a substantial part of the economy to overcome some of the common limitations of the traditional financial system reducing bureaucracy, fees, and dependency to large financial institutions, and even in some use cases assist government in tax avoidance and money laundering for the benefit of the greater good.
CryptoEscudo is a unique opportunity to solve the serious problem of national debt that Portugal faces and that will affect future generations.

References

[1] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System" https://bitcoin.org/bitcoin.pdf, 2008.
[2] Litecoin.org, https://litecoin.info/index.php/Comparison_between_Litecoin_and_Bitcoin