GLOBAL COINSTAR DIGITAL CURRENCY

Decentralized Global Digital Currency Peer-to-Peer Finance Network

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Abstract

Global Coinstar is a new Decentralize Global Digital Currency on a Network. It's an Upgraded System of Digital Currency that allows online payments to be sent directly from one party to another without any authority. GCS digital currency have two (2) methods to send assets through the Blockchain Technology, peer to peer transactions Provide a Digital voucher and Digital Smart card, using Cryptographic algorithm. These two methods will provide new transactions systems, Digital voucher and digital Smart card, for payments transaction Globally and Store record in blockchain.

We have provided a Confidentiality, integrity and availability with encryption algorithm for these two methods – transaction Digital Voucher and Digital Smart card. *© 2024 The Author(s)*

Introduction

Global Coinstar (GCS) is a Global Digital Currency on a Network that is not Controlled by any particular Country or Company and Providing to Operate worldwide to make international payment Transaction Easier and Create more Economy System in the world.

the GCS that works similar to Cryptocurrency is a Digital Decentralized peer to peer Network and trading it through Digital Voucher and online Payment transaction with Digital Smart card, under blockchain Technology.

Mission Statement

Providing Easier access for international Transactions without any Intermediate Central authority or Banks; Managing transactions for particular individual or Company and Create More Economic freedom around the world and Reducing Suffering of people in the world.

Vision Statement

Its Vision is to become one of the best Channel of international payment transactions to Global commercial activity, Buying Products, Buying Crypto,

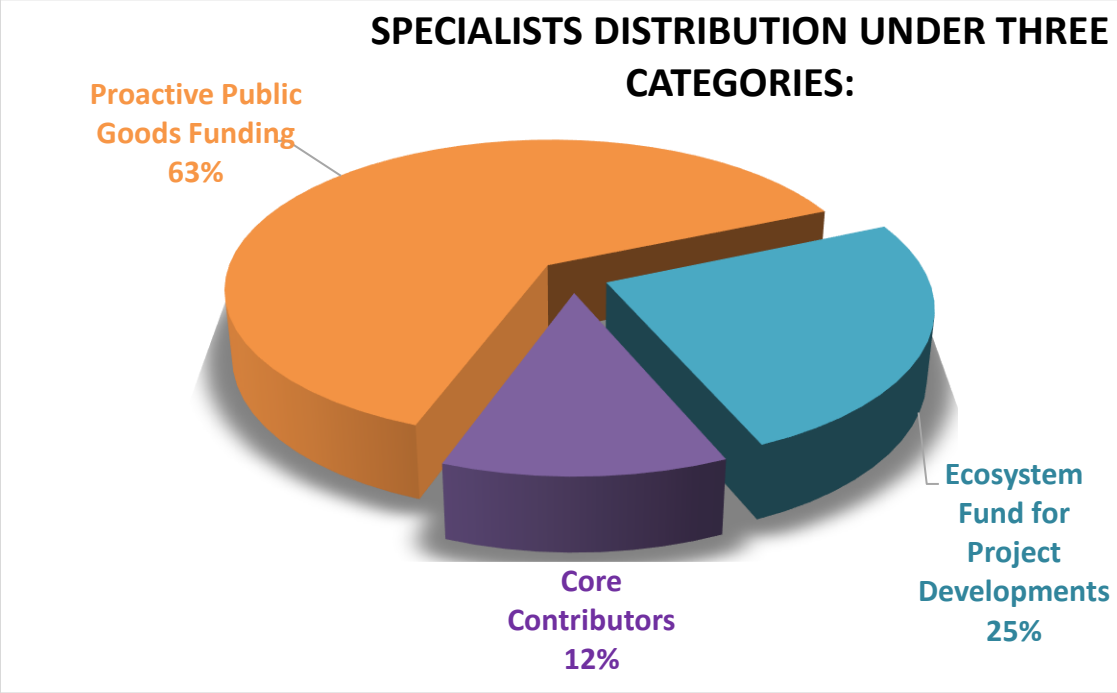
Paying Bills, transportations (e.g., flight tickets, train tickets etc.) and online shopping (e.g., Amazon, AliExpress, eBay etc.) and furthermore, Using Digital Smart Card (DS Card).

Coins Supply

GCS Digital Currency will Provide three (3) rounds of maximum Supply limited, they have four years between one Supply to each, the first-round total supply is 10 billion (10,000,000,000) and remaining two-rounds Supply has no specific amount yet.

Coinstar Global Currency Distribution

1. Proactive Public Goods Funding: 63%
2. Ecosystem Fund for Project Developments: 25%
3. Core Contributors: 12%



Global Coinstar Subunits

There are Currency Subunits as Follows:

1. Millicoinstar (MI) 1/1,000
2. Microcoinstar (MC) 1/1,000,000
3. AB-Coinstar (AB) 1/1,000,000,000

Transactions

In a standard banking system, for example, the state is a balance sheet, a transaction is a request to move $X from A to B, and the state transition function reduces the value in A's account by $X and increases the value in B's account by $X. If A's account has less than $X in the first place, the state transition function returns an error.

The "state" in Coinstar is the collection of all Currency (technically, "unspent transaction outputs" or UTXO) that have been mined and not yet spent, with each UTXO having a denomination and an owner (defined by a byte’s address which is essentially a cryptographic public key).

Global Coinstar State transactions functions as originally peer to peer transactions with another Methods Transactions which is Digital Voucher (DV) and Digital Smart Card (DS Card), these two methods can be defined transactions as follows.

Digital voucher (DV)

A digital voucher (DV) its new peer to peer transaction system that will trade the asset without any denomination shareable, like wallet address, you can use the voucher to add asset into wallet Accounts without sharing the wallet address.

Digital voucher they have own “non-fungible voucher” (NFV) will provide voucher identity code (VID) each one and Timestamp that will not be alteration or replace to another and an owner of the voucher who generates them. They have User identity number (UID) to identify the owner of the voucher. They will use these identifications to verify if the voucher is validating or invalidating this voucher, they used with the hash function to be encrypted so that no one can read or access the voucher code.

When the owner generated voucher already will be broadcast to all nodes, they know a new voucher has initiated it will distribute voucher identity code(VID), Timestamp and voucher owned User identity number (UID) to the all nodes this voucher, when processing generates new voucher, our Coinstar Virtual Machine (CVM) System they will create voucher code and

voucher password using hash function encryption system and linked with a owned user identity number (UID) and store vouchers record in blockchain.

When the beneficiary uses the voucher, they will be using the nodes accessible and the voucher identity code (VID) when they put voucher code into the nude they will check if the voucher is valid and voucher was not used by any person if the voucher is validated and no one has used the voucher, they will take you to the next step and allow you to put a voucher password then you allow to add money into the wallet.

Advantage of Digital voucher

Digital voucher has a lot of advantages. They have confidentiality that nobody knows Your denomination Address that you received your asset like a wallet address, there is no issue of network interruption or transactions delaying, funding at any time you want in your wallet account.

Digital Smart Card (DS Card)

A digital Smart card (DS Card) Is a new smart digital debit card provided on a blockchain network; digital smart card can be used on a digital decentralized Network for online payment transaction systems.

DS card is similar to virtual debit card (e.g., Master card, Visa card etc.) and this card will work unlike a native Debit card you know, but this digital card will provide it using Cryptographic algorithm and encrypted card with hash Code.

This card is not under the control of any authority, the owner of the card they have full Strong control over the card, they will be activated card when they need to use and they have the right to deactivate the card for security to their assets.

The card has a payments accessible code that will allow to use the card for Online payments transactions. For another Security when you see symptoms of the attack to your account you have the right to Regenerate new card accessible code on your DS wallet, this strategy will help People to provide strong security to their money.

To ensure the safety of people's property, they will be provided DS wallet in their original wallet account which card allows access to debit money from

the DS wallet, this card only Digital Smart wallet (DS wallet) will Allow to Withdraw money.

Global Coinstar Accounts

In Global Coinstar, the state is made up of objects called "accounts", with each account having some byte's address and state transitions being direct transfers of value and information between accounts. A Global Coinstar account contains Three fields:

- The **miner Account**, a miner account which is used to Store a mined asset before transfer to Storage account.
- The Account's **Storage,** which is use to Store a Coinstar asset (empty by default).
- The account's Current **Coinstar Balance,** the Coinstar Balance Account which is used for Transactions in blockchain.

In general, there are three types of accounts: **Individuals owned Accounts,** Controlled by Private keys, and **cooperate owned Accounts,** controlled by two to three Person and **Externally owned Accounts,** which is Used for Cryptocurrency Exchangers. An **Individuals** owned account has no any one can send a message from personal owned account by creating and signing a transaction, only the account owner can read and write to internal storage and send money. A **cooperate** accounts was created By Company/organizations to store assets Payments Transactions. Cooperate account it allows to controlled by two to three persons can read and write internal messages and allow to debit money from the account.

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-task (POT) for its block.
4. When a node finds a proof-of-task (POT), it will broadcast the block to all nodes.

5. Nodes accept the block only if all transactions in it are valid and not already spent.

Nodes always consider the longest chain to be the correct one and will keep working on extending it.

Mining

The Coinstar blockchain is in many ways similar to the Cryptocurrency blockchain, although it does have some differences.

The algorithm for checking if a block is valid, expressed in this paradigm, is as follows:

- ✓ Check if the previous block referenced by the block exists and is valid.
- ✓ Check that the timestamp of the block is greater than that of the previous block and less than 8 hours into the future
- ✓ Check that the proof of task (POT) on the block is valid.
- ✓ Let S [0] be the state at the end of the previous block.
- ✓ Let TX be the block's transaction list, with n transactions. For all i in 0...n-1, set S [i+1] = APPLY (S [i], TX [i]). If any application returns an error, exit and return false.
- ✓ Let S_FINAL be S [n], but adding the block reward paid to the miner.

Essentially, each transaction in the block must provide a valid state transition from what was the canonical state before the transaction was executed to some new state. Note that the state is not encoded in the block in any way; it is purely an abstraction to be remembered by the validating node and can only be (securely) computed for any block by starting from the genesis state and sequentially applying every transaction in every block.

Additionally, note that the order in which the miner includes transactions into the block matters; if there are two transactions A and B in a block such that B spends a UTXO created by A, then the block will be valid if A comes before B but not otherwise.

Scalability

Global Coinstar Scalability. It is the capability of a system, network, or process to handle a growing amount of works or its potential to be enlarged to accommodate that growth.

Conclusion

Global Coinstar is the First Decentralized Global Digital Currency Proposed Without relying on third party. Global Coinstar will Provide a Smart Debit Card, which is Called Digital Smart Card (DS Card) and Digital Voucher's (DV). Digital Smart Card Which Provides Strong Control by the ownership to protect the Card. We proposed a Digital Smart Wallet (DSW) in Each Accounts, which allows to Withdraw money.

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