MARTKIST

Decentralized Anarchy

"Our vision is freedom, community organization and intelligent allocation of resources"

Whitepaper version 1.0

Abstract

Martkist leverages on blockchain technology to introduce a decentralized marketplace, which has a strong community governance, budget proposal voting systems, and access to decentralized assets. Martkist will give its platform users a series of features including implementation of smart contracts creating numerous opportunities with different use cases. For instance, participating in an online decentralized marketplace with an escrow service to further bolster global e-commerce. Notable problems Martkist solves include inaccessibility of global trade, the existence of middlemen in sending and receiving funds worldwide, the huge cost of transacting, skewed access to opportunities including job offers and security of transactions.

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Introduction

The online retail industry with key giants such as e-Bay and Amazon brought to the world the term marketplace and its revolutionary aspects of trading online. Buyers and sellers are using such platforms to purchase anything imaginable and in most cases can trade with anyone worldwide. However, this was not with limitations especially with the fact these platforms are highly centralized thus among other issues not being user-centric. Besides, merchants pay huge fees, lack of an exchange payment method, users susceptible to fraudulent dealings including the sale of counterfeit goods, being a victim to outright scams, identity theft and unwarranted chargebacks. Notably, these centralized platforms alienate the social dimension of the trading process significant to the creation of trust amongst players in a marketplace platform.

Application of blockchain technology across industries is proving to be revolutionary by businesses leveraging on this disruptive tech to solve industry challenges. Precisely, the introduction and premiering of Bitcoin and other cryptocurrencies, increased adoption could disrupt e-commerce platform further. For instance, the idea of accepting Bitcoin as a payment method by the online marketplaces will massively solve the challenge of not having an appropriate and globally accepted exchange payment method.

It is for this reason Martkist a "decentralized anarchy" project is being introduced to bypass existing third parties and create a truly decentralized marketplace backed by a growing and strong community.

What is Martkist?

Martkist stands for Decentralized Anarchy, which represents a decentralized economy with a community focus and budget proposal voting as strong features of this new marketplace. Also, the value proposition of Martkist is evident through the building of a global community network, working within a decentralized network while leveraging on the benefits of open-sourced blockchain technology.

Hence, this decentralized marketplace incorporates fundamental features aimed at improving the entire global e-commerce business. For instance, users on the platform will benefit from using Martkist native coin known as MARTK. Additionally, the platform users will enjoy unlimited access to inventory and security of their funds while transacting aided by an inbuilt escrow system. The escrow system holds user's funds until terms set out in smart contracts are met, thereafter, releasing the funds to the transacting parties.

A revolutionary feature of the Martkist platform is its integration of a distributed certificate management system. Therefore, with the help of cryptographic technologies, users can authorize, issue and exchange several digital certificates. By having this feature, Martkist is and hopes to create a wide community of users who can create and exchange digital assets including, software licences, event tickets, receipts, certificates and other ownership documents. In addition, build and develop applications that would aid the exchange of such digital assets and other business applications on top of its blockchain network.

Technology Stack

Martkist is developed as a protocol rooted in the blockchain network. In this connection, the project is using the Z-DAG also known as the Zero Confirmation Directed Acyclic Graph, which allows Martkist to have an instant settlement protocol essential to all its features. Additionally, Martkist has an asset infrastructure as well as a masternode system that allows for a hybrid consensus model PoW at 70% while the PoS is at 20% within the Martkist network.

Zero Confirmation Directed Acyclic Graph (Z-DAG)

This is an instant settlement protocol embedded in the technology applied to all functions of Martkist. Some of these functions include offers and assets available on the decentralized marketplace, escrow service, alias identities and certificates. Each function available on Martkist is controlled and accessed via an Alias. This is where private keys are essential and must prove ownership by matching each unique address. It is a deliberate move to hinder against the double-spend problem. To achieve this, all transaction are processed through two consensus layers. The first layer does not entail recording of transaction in a block rather this is posted in a mempool and allows transactions to happen in real-time[1]. Thereafter, the secondary layer will pick up the function of transaction confirmations plus conflict resolution as a measure of hindering double-spend problem by use of the Proof of Work consensus. In the event of a discrepancy, Proof of Work algorithm will apply and result in bypassing such a transaction, leading to a replay of the correct order of transactions as per validation of the miner. Maintaining the earlier state of events on each block allows for rolling back before proceeding to the next one.

[1] https://themoneymongers.com/bitcoin-mempool/

Conflict Resolution and Saving Order of Events

Martkist has a user interface layer responsible for notifying users of any conflicts and in real-time usually taking between 3 to 5 seconds. In order to ensure security and efficiency of Martkist this is the statistically set time to have a blockchain network take notice of conflicting transactions due to an occasioned double-spend event. Further, the Martkist's masternode system is helpful to this course by having each masternode connected at least 30 or more peers that provide high throughput to relay such events across the network. More so, with every such block resolved there is a new MARTK realized to the validators.

During the creation of a new block, a miner is required to process asset transfer from the oldest to the newest. Preventing any dubious acts, the network has a 10-second delay (non-enforced) on all transfers. This hinders Aliases from participating in the transfer of an asset within the minimum set latency period allowing the processing of a miner to take charge. Nevertheless, an asset transfer can be orchestrated within this set minimum latency period leading to a conflict state and as such users will wait till the next block generation to have or confirm their asset transfer.

All asset transfers are processed on a first come first served basis altering users who may tend to disrupt the system by inputting higher transaction fees into the network.

Assets Infrastructure

Martkist platform will have a tokenization layer allowing users to trade and exchange various digital assets. Some of the possible use cases aided by this Martkist network include tokens and cryptocurrencies backed by real physical assets such as gold or other precious metals, loyalty points plus service backed tokens.

A case in point is a user who wants to track diamond or oil-backed asset token. The owner of such commodities can track ownership of the whole batch of diamonds or barrels of oil serialized and stored in a vault. This works through the owner tracking inputs during the sending transaction of the tokens and places ownership claims by linking this to an external serial number all stored securely in the Martkist network.

Achieving this will require an application of building of a point of sale (POS) applications to attract more users to the platform and build their e-commerce businesses. Z-DAG protocol will be essential and a pillar technological application to achieve this objective especially with its ability to allow instant settlement of transactions.

Application of CAP Theorem In Martkist Point of Sale Applications

Developed by Professor Eric Brewer thus also known as Brewer's Theorem states a distributed system can't provide more than 2 of the most desired 3 characteristics. Therefore, when building a cloud application based on a distributed system always choose a data management system that will deliver the characteristic highly needed by the use case application. Among the three characteristics includes Consistency, Availability plus Partition tolerance (CAP)[2].

Implementing Z-DAG allows Martkist to trade some consistency for availability. Precisely, owing to the unlikely any re-organization or a double-spend event will occur affecting a user's final balance. The technology works in a way that no delay would have been caused by delays of having to wait for transactions to confirm. In this case, rendering Martkist as a potential use case in point of sale applications.

[2] Brewer, E., 2012. CAP Twelve Years Later: how the. *Computer*, (2), pp.23–29.

Additionally, Z-DAG can order a sequence of the dependency graph of transactions and recognition by a miner of any events such as attempts to double-spend or sending too many transactions quickly.

Martkist implementation of the Z-DAG protocol aids realization of real-time point of sale applications in the project's ecosystem while using a token to a service model. For example, a sender will send a receiver some tokens and the receiver can detect any event of double-spend within 10 seconds. However, with the Z-DAG technology, the receiver benefits from the low-value transaction already discovered in the network and being transmitted to the actual receiver whose transactions are safely stored in the previous block. Therefore, within the set delay period receiver gets notified of funds confirmation in the network marking the end of the contract between the sender and receiver as complete.

Instances involving non-fungible tokens, the platform designed their storage of ownership as being input range based. This input range represents those tokens of an asset or belonging to certain identities when transferred they will split at first and later on merge the ranges accordingly as illustrated below.

$$A_1 \supseteq A_2$$

In this case, let A_1 represent the superset of the range of inputs belonging to the sender while A_2 is the subset of input range to be received by the receiver. This will allow us to derive A_3 as follows:

$$A_3 = A_1 / A_2$$

It is, therefore; possible for a receiver to send a set of this back to the sender, however, the ensuing transaction, which is now, A^1_2 is a strict subset of the initial A- identified by the following operation:

$$A^1{}_2 \supseteq A_2$$

Decentralized Marketplace

Martkist mantra is “decentralized anarchy” which has led the team to develop a truly decentralized marketplace supported by a strong community of users with different use cases on the platform. The decentralized marketplace aided by immutability, auditability and security of blockchain network users can view verified and trustworthy listing descriptions, listings and services based on geo-location feature plus an open pricing system.

Features of Martkist Decentralized Marketplace

a. Digital Assets and Sales

Our platform users will be able to sell their certificates of digital ownership. A user willing to sell such certificates will be owners of private information, for instance, property registration, software licence keys or codes. By use of smart contracts upon the meeting of all terms of trade, the certificates are automatically transferred to the buyer.

b. Creation of Auctions

Martkist allows sellers to create offers on listed items as auctions with features such as minimum and reserve bid price and fixed countdown time. Other options include the opportunity to set up timed auctions with a "buy it now" option available to prospective buyers.

c. Platform Moderation and Private Offers

As a measure to control offers that violate our set out moral and ethical code of conduct safe search feature will be used to moderate and blacklist such users.

Additionally, sellers on the platform can choose to enable the one on the option of one deal by setting their offers to private.

d. Transparent Rating and Feedback System

Users such as merchants, arbiters and buyers can give and receive rating and feedback as per their engagement on the marketplace. Martkist will implement an emoji-based rating and feedback system as its easy and direct to use by users when expressing their satisfaction per transaction basis. The same applies to services and offers conducted through the escrow system.

e. Whitelist Reselling

Martkist is all about opening up e-commerce opportunities for everyone globally. Therefore, merchants may benefit by activating the re-sell offer feature on their listing with a commission-based system. Creating more business opportunities by tapping individuals interested in drop-shipping with a proven record of sales available through the decentralized Martkist database of resellers.

f. Notification System

The platform will have a notification system for the payment processed, escrow system and an acknowledgement by the merchant that they are about to ship a product.

g. Unique Identity Supported by Blockchain Technology

Implementation of cryptographic security features on the platform will enable Martkist users to update own identities embedded to their digital assets on a blockchain-anchored identity. This will serve the purpose of bolstering security feature on the platform for example; by ensuring actual user identity signed up on

Martkist matches used public address orchestrating any activity on the decentralized marketplace.

h. Unlimited Payment Options

Martkist marketplace allows unlimited payment options including transfer, ownership and conversion of leading cryptocurrencies on the platform to ease e-commerce and community engagement. However, users who seek to access services and platform functions will have to convert their respective cryptocurrencies and tokens to our native coin MARTK.

i. Encrypted Message Service

Martkist users will use an instant encrypted messaging service to connect and engage with other users on the platform especially those carrying out trade on the marketplace. This will involve the use of cryptographic features to make sure only targeted recipient of the message can decrypt it. Besides, the platform has multiparty encryption for instances where users need to engage in a group messaging service.

Escrow Service

An escrow service is important in a marketplace like Martkist because it ensures safe payment of services. This entails holding of the buyer's funds in an integrated escrow until all parties agree terms set out in the contract are met. In the event, the seller does not meet the terms as stipulated, the escrow will be prompted via our smart contract system to refund the buyer's funds.

An Open API for Developers

Developers are important target users of Martkist decentralized marketplace. Hence, the platform will have an open-API with specific compatibility requirements for our software developers. It will be accessible worldwide to allow software developers across the globe to build blockchain applications on top of our blockchain network.

this connection, the open-API will prioritize different language choice depending on the needs and viability of blockchain business solutions proposed by software developers.

Masternode Technology

In addition to other functionalities applied to the Martkist decentralized marketplace is the masternode network. This functionality helps the marketplace to achieve other objectives include decentralized governance in its community, real-time transaction plus Z-DAG. In order to create a symbiotic relationship between masternodes and miners, we've developed the network to allocate block rewards on 20% and 70% MARTK respectively. Meaning the focus of Martkist in the long run to be a sha256 Proof of Work mined decentralized marketplace a major distinguishing factor against other decentralized marketplaces. Such a choice of being a long-term project focused on PoW algorithm just like Bitcoin is that it allows us to attract more miners while still decentralized but who have a long-term commitment[3]. Furthermore, ASIC miners are now low cost especially rented ones over the Internet. As well as have miners who understand their investment in Marktkist mining thus ready to commit to our overall objective of building a community within the marketplace while still focusing on its development, rewards and proposal budget voting. In addition, the team will not be conducting any ICO, presales or pre-mining activities but the focus is building a product that resonates with the interests of the community who are major contributors to its success. In order to run Martkist masternodes, a user is required to stake 18,000 MARTK.

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3 https://www.researchgate.net/publication/325172962_A_Short_Introduction_to_Innovative_World_of_Masternode_Coins

Community Governance

A cryptocurrency or crypto-token gains its worth as the community behind it. We will use Martkist masternode system to bolster our efforts to create an organic community of all stakeholders relevant to our eco-system around the globe. Evidence of this was our first announcement of Martkist project on bitcointalk.org on the 20th January 2020[4]. This has been significant to the growth of our community in terms of news announcements relating to the project and will continue to grow in the future. For instance, the project looks to recruit interested candidates to join and be part of the community by taking up jobs available on the marketplace. Fundamental starting points to these job offers include actual jobs related to the development and growth of Martkist. Nonetheless, these community job offers will continue to be available to this portion of our users in future opportunities for instance, with blockchain development applications brought on-board by software developers as support to such projects associated with Martkist.

As a measure of promoting sustenance and growth of the project masternode operators will be in charge of Martkist governance. Therefore, aiding Martkist achievement of decentralized governance, which is essential to the development and promotion of the platform plus the community[5].

For instance, the masternode operators will be important to create resilience in the Martkist network through their ability to create an infrastructure that is shared and distributed. In the end, this brings sustainability and adaptability required within the

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[4] https://bitcointalk.org/index.php?topic=5219308.0

[5] https://medium.com/bitgreen/masternode-governance-the-importance-of-voting-4b944ac7eaef

Martkist network. Furthermore, masternode ownership within the network will democratize the platform further helpful in propagating widespread adoption of the project. Finally, these operators will aid the ability of the community to validate the assumed project's model possible through adoption and actionable decisions.

Budget Voting System

The budget voting system highlights the fundamental role played by masternode operators in Martkist marketplace. It has a voting mechanism based on decentralized voting leveraging the blockchain network. Therefore our masternode operators will have access to public portal, which serves the purpose of promoting transparency in the voting process.

Users in the community will get a chance to introduce new projects via the marketplace budgets voting portal. It will then go through the vetting process where each participant will campaign and communicate to the community why their project is market worthy and should receive funding. Upon a project passing the vetting and appraisal stage, it is added to the total budget where it will have funds paid directly to the person completing its development. This is after masternodes with each operator owning one vote despite staked amount cast their vote in favour or against a project. Options to vote available to masternode operators on a proposal will include "vote yes", "vote no" and "vote to abstain". Broadcasting of votes will follow this across the network and tallied to depict the winning project amongst other proposals. Payments are also decentralized through a superblock that earns a reward of 10% of the total amount allocated for budget proposals in a month. More so, it allows Martkist to hire more talent, for instance, core developers for the winning projects and is paid in MARKT. Other job offers that will be available to the community include marketing, partnering firms for instance within the PR sub-sector as well as

community bounties. All this allows Martkist to grow its value by developing a strong community who gives and receives value to the platform's ecosystem.

Martk Coin Specifications

Coin Name	**Martkist**
Algorithm	Sha256
Ticker	MARTK
Block Time	60 Seconds
Block Size	6 MB
Difficulty	Adjusted Every 3 Seconds
Supply	30 Million MARTK in 10 Years
PoW	Long Term Mining
Masternode Rewards	10% Super Blocks, 20 % Masternodes, 70% Miners
Masternode Collateral	18,000 MARTK

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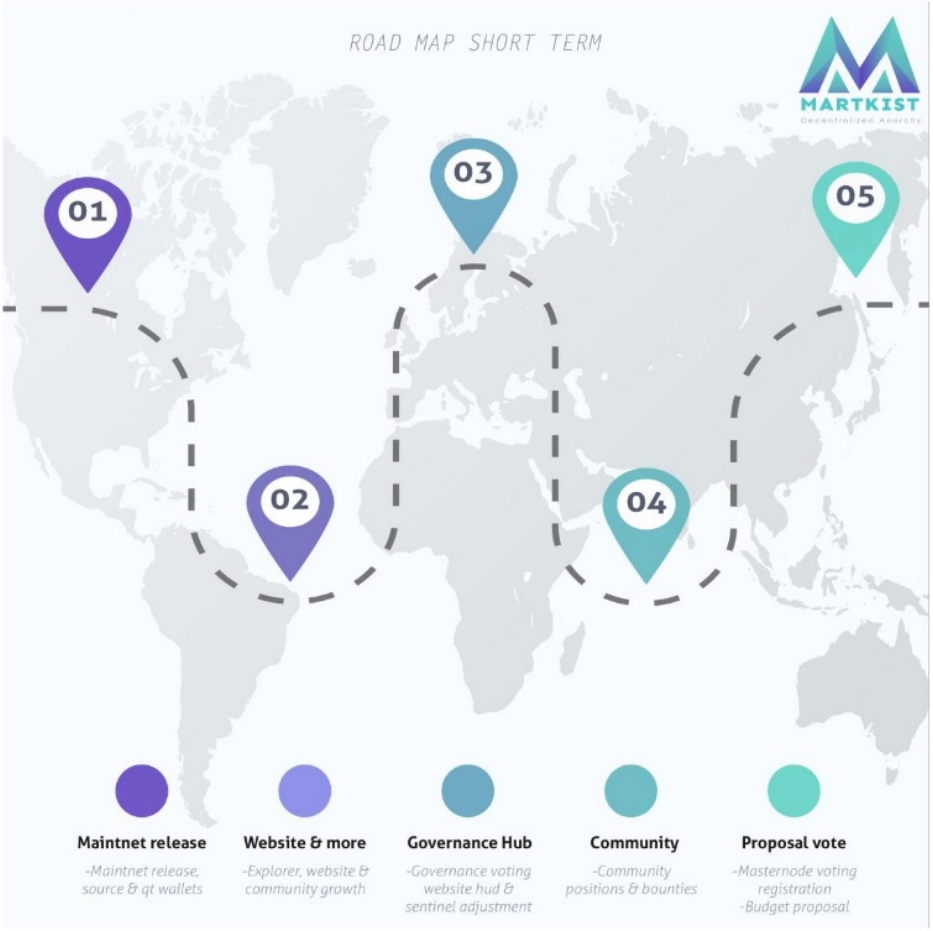
RoadMap



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