MUNHUMUTAPA AFRICA BLOCKCHAIN

WHITEPAPER PRESENTATION

2024

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- All references in this paper to the Munhumutapa Alphablockchain platform, regardless of tense, are intended to be references to how the platform will function when it is fully operational.

TABLE OF CONTENTS

TABLE OF CONTENTS

FOREWORD

Blockchain has revolutionalised how the world sees and utilizes the internet. As the embodiment of decentralisation, it has mapped a way to develop networks and services for everyone, that most importantly, do not belong to anyone other than the collective.

What's in a name?

The blockchain is named "Munhumutapa" after the title given to the King of the Mutapa Empire that once existed in Southern Africa. The term Munhumutapa is a Shona word that translates to, "Human Conqurer" in English.

INTRODUCTION

INTRODUCTION

Blockchain technology has opened up possibilities in almost every sphere of technology from finance, logistics, real estate to agriculture, politics and charity etc. Everyday there are new projects which seem to apply the technology to a previously unexplored industry or facet of modern life. Blockchain technology has made processes cheaper, faster, more transparent but most importantly, decentralised.

While a significant part of the world's population has fully understood the technology and a part has also directly joined in the space, most have not been made aware, educated and considered throughout the development of the technology particularly the third world, specifically, Africa.

Blockchain is probably needed most in Africa where financial services are available to the urban population to a very limited extent as the significant part in rural and semi-urban is largely neglected. Even taking into account the urban population, most of the services are priced out of reach or largely too expensive compared to other parts of the world.

INTRODUCTION (Cont.)

These services include banking, money transfers, insurance etc which are basic and should be generally available to everyone. However, statistics show the penetration of blockchain technology into theses societies is very much negligible.

This is due to the lack of active efforts to cater to these societies as most platforms are focused on being the next big thing rather than catering to those who need the technology more. Also, Africa also has a pre-existing problem of very low internet penetration which makes use of blockchain much more difficult and expensive.

THE BLOCKCHAIN

001

WHAT IS MUNHUMUTAPA AFRICA BLOCKCHAIN?

The Munhumutapa Blockchain is a trustless blockchain network. The blockchain is built with a multi-chain hosting capability coupled with out-of-the box smart contracts called "distributed applications" to enhance its functionality. The blockchain architecture is designed with scalability, affordability, and ease-of-use for its applications.The platform is specially built to support a digital financial ecosystem for the African SME economy as well as peer-to-peer digital transactions.

The Munhumutapa Africa Blockchain is written in Java language and use the SHA-256 standard for encryption. The use of Java as the coding language was enforced through the fact that the project was initially a fork of the ARDOR Platform developed by Jelurida.

OVERVIEW

The Munhumutapa Africa Blockchain has been developed to serve the digital African market via an independent blockchain platform that grants SMEs and individuals alike a gateway to a digital economy that connects businesses across Africa to other businesses as well as customers in a cheap, efficient, and decentralized manner through digital tools built on blockchain technologies.

Overview (Cont.)

The blockchain also aims to assist the African Continental Free Trade Area reach its maximum potential by providing a transaction processing network that facilitates cross-border payments and trade that is fast and secure and most importantly inclusive.

The Munhumutapa Africa Blockchain hopes to achieve this, by building on to the platform tools that are tailored to the unique needs of the African economy which are rarely addressed by technologies developed abroad which tend to be rather oblivious to the challenges faced by African businesses and general people which include limited Internet access, inflationary economies, corrupt governments, lack of infrastructure and very limited access to capital .

002

ARCHITECTURE

MUNHUMUTAPA ACCOUNTS

To access the blockchain and it's functions, users are required to create an account on the blockchain from which they gain access to Munhumutapa's system.

Accounts on Munhumutapa are free to create and take a recognisable address format which is easy to memorize and share with other users.

Users can create as many accounts as they want and are all anonymous meaning noone can be linked to an account simply through account creation and/or use.

ACCOUNTS

Munhumutapa accounts are secured by a private key generated from a secret passphrase which secures the account. Accounts are identified on the blockchain by a unique public key also generated from the secret passphrase.

To make the accounts more easily identifiable, the public key is converted to a Reed-Solomon based account address that is easy to remember and is more aesthetically superior.

Account Address: MUNHU-XXXX-XXXX-XXXXX

Through the account users of the blockchain can access the tools and functions of the Munhumutapa Africa Blockchain as well as store digitally-owned assets and titles.

CHAINS

THE MUNHUMUTAPA BLOCKCHAIN IS A MULTI-LAYERED PLATFORM WITH A MAIN CHAIN, MUNHUMUTAPA ALPHACHAIN & MULTIPLE CHILD CHAINS, BETACHAINS & AN EXTRA FUTURE LAYER OF LOCAL CHAINS (ZETA CHAINS)

MUNHUMUTAPA CHAIN LAYERS

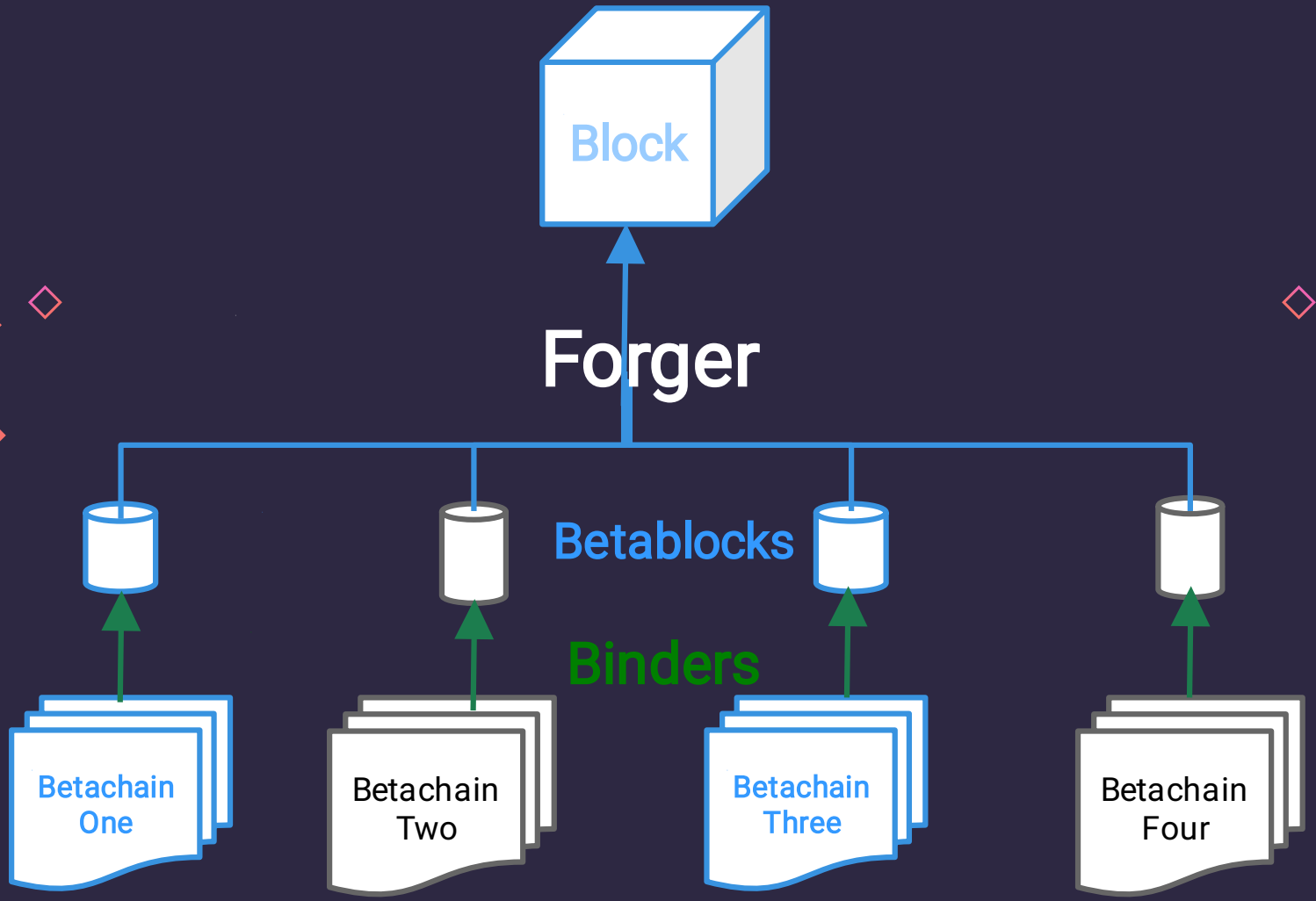
ALPHACHAIN

This is the main chain of the platform and is where blocks are generated, signed, broadcast and added to the blockchain

BETACHAINS

These are chains hosted by the alphachain. Each betachain processes its own transactions before they are sent to the alphachain for inclusion in blocks.

MUNHUMUTAPA LAYER SYSTEM



MUNHUMUTAPA ALPHACHAIN

- Security
- Consensus
- Blocks

- ✔ The Alphachain is the platform's engine, recording, validating and storing transaction data.
- ✔ Security of the entire platform is provided by the chain as blocks are generated here.
- ✔ Consensus for transaction processing and account states is also provided by the chain for all carried chains.
- ✔ Blocks are created on this chain and therefore it's coin is the only valid stake for block generation.

MUNHUMUTAPA BETACHAINS

- Features
- Applications
- Private

- ✔ Betachains house all the decentralised features of the platform.
- ✔ Applications of the blockchains capabilities are also found on these chains.
- ✔ Transactions executed on these Chains are recorded in chain-smoker office blocks called betablocks.
- ✔ Each chain's betablocks are forwarded to the ALPHACHAIN as single transactions.

BETACHAIN TRANSACTION PROCESSING

Transactions initiated on BETACHAINS are first processsed on the betachains themselves. Every transaction submitted on a Betachain pays a transaction fee payable in the chain's own betacoin. The minimum paid transaction fee is systematically determined by the current exchange rate of the betacoin to the MUTAPA Coin on the Munhumutapa Exchange Centre dex.

Betachain transactions are processed by specially activated accounts. These accounts activated to process Betachain transactions are known as '**binders**'. These accounts collect up to 100 betachain transactions and group them into a single transaction called a '***betablock***'. These binders receive the transaction fees paid for each transaction as a reward for adding it to a betablock.
After creating a betablock, binders submit it to a forger on the alphachain, to whom they pay transaction fees in the form of MUTAPA Coins for it to be accepted and processed accordingly.

* **To be a 'binder', an account should hold at least 1000 MUTAPA COINS**

BINDERS

Binding is an activated option and requires manual setup:

- Binders set the fee they charge to accept a Betachain transaction. This fee is paid in betacoin of the chain they are active on.
- Binders also specify the maximum fee they can pay a forger to accept their generated betablocks.
- Binders specify the maximum amount of MUTAPA Coins they are willing to pay as extra for their generated betablocks.
- Binders can pick the types of transactions they are willing to process.

ALPHACHAIN TRANSACTION PROCESSING

Alphachain transactions are either native (transfer of Munhumutapa Coins) or forwarded betablocks. Both are processed in the same way by forgers (block creators).
Forgers collect up to 10 alphachain transactions and writes/records them into a block which is added to the blockchain. The forger of a block is rewarded with the transaction fees paid for each transaction they include in their created block.
Transaction fees paid for alphachain transactions varies depending on urgency of the transaction submitter but a minimum payable fee of 1 MUTAPA Coin is required.

***To be eligible to be a forging account, a minimum balance of 1000 MUTAPA Coins is required**

TRANSACTION METRICS

BLOCKS

A block is a collection of valid transactions executed on Munhumutapa alphachain plus binded betachain transactions.

Blocks on Munhumutapa contain a maximum of 10 transactions.

In each block, every Betachain has a reserved slot for one betablock.

A block can be forged whether full, partially full, or with no transactions at all.

Each block is signed by it's forger which gives it a unique generation signature.

BLOCK PARAMETERS

- *A block version, height and block identification tag*
- *A block's timestamp*
- *A hash of the previous epoch and its timestamp*
- *Slot identity tag*
- *The public key and identification of its forger*
- *The ID and hash of the previous block*
- *The number of transactions stored in the block*
- *The total fees associated with the block.*
- *transaction data of entries in the block and respective transaction identification*
- *The payload length and hash value of its payload*
- *The block’s generation signature*

Network Proof-of-Stake (nPoS)

Consensus Protocol

FORGING DETERMINATION CONDITION

TARGET VALUE > HIT VALUE

For an account to be in the running to forge the next block, it's computed target value should be greater than the blocks hit value.

HIT VALUE

The hit value for all accounts is the same and is based on the following parameters:

1. A forger's Public key

2. Signature hash of the previous block.

FORGING DETERMINATION PARAMETERS

Block creators (forgers) are randomly selected after the generation of each valid block. Chances of claiming the right to forge a block are dependent on the network state of an account node in addition to its alphachain balance.

Stake

The MUTAPA balance of an account which has been static for at least 1440 blocks

Network

The number of up-to-date network nodes the host node is currently connected to.

TARGET VALUE

The target value of an account is unique as it is determined from non-uniformities

1. Base Target
The base target is the time between the forging of the previous two blocks. This is the same for every forging account.

2. **TimeSinceLastBlock**
The time elapsed since the last forged block.

3. Effective balance of candidate.
The Effective balance of an account is the Munhumutapa Coin balance which has been static for 1440 blocks or more.

4. Number of Connected Peers
The number of peers a node is currently connected to.

CALCULATION OF THE TARGET VALUE

TARGET =
Base Target * Time Since Last Block * Effective balance * Number Of Connected Peers

DERIVATION OF THE HIT VALUE

Each block on the Munhumutapa blockchain has a generation signature parameter. During the block forging process, a forger cryptographically signs the block with its public key to create a 64-byte signature, which is then hashed using SHA256. The first 8 bytes of the resulting hash is the hit value.

SELECTING A BLOCK FORGER

The hit value and target value are subsequently compared and if the condition:

TARGET VALUE > HIT VALUE

Is satisfied, the account can forge a block. However, multiple accounts can satisfy the condition for forging at the same time, so the first account to generate a block gets their block added to the blockchain.

CUMULATIVE DIFFICULTY

The cumulative difficulty of a chain on Munhumutapa is the comparative weight a chain carries i.e. it's authority. It is useful for selecting the correct chain in the result of a fork due to either two accounts generating blocks at the same time or during server startup and more than one chain is received from different nodes.

CUMULATIVE DIFFICULTY DETERMINANT PARAMETERS

D_{cb} is the difficulty of the current block

D_{pb} is the difficulty of the previous block

T_b is the base target value for the current block

CALCULATION OF CUMULATIVE DIFFICULTY

$$D_{cb} = D_{pb} + [(2^{64})/T_b]$$

CUMULATIVE DIFFICULTY

So when multiple blocks are forged and proposed simultaneously, the block with the highest cumulative difficulty is taken as the progressive and authoritative one

SECURITY ANALYSIS

S

SHUFFLING ATTACK

Fails as forging requires a balance static for at least 1440 against a max rollback of only 720 blocks

S

SELFISH FORGING

Fails because the base target increases with time since the last block ensuring other accounts eventually generate a block

%

51% ATTACK

Fails since the target value is also dependent on the network which can blacklist the attacking node while boosting the other node accounts.

N

NOTHING AT STAKE

Unlikely as nodes on a fork are disconnected from thereby reducing the target value for the forger and diminishes their forging power.

SECURITY ANALYSIS

H

HISTORY ATTACK

Fails since forging can only be undertaken by a node less than 720 blocks behind the expected blockchain height at any given time.

G

GRINDING ATTACK

Fails because a node running on a different algorithm is immediately blacklisted by other nodes as a fork and cannot contribute to the chain.

BETACHAINS AND APPLICATIONS

003

INTRODUCTION

BETACHAINS

The most important function of Munhumutapa.Africa blockchain is it's child chain system of BETACHAINS. These carry most of the of the transaction burden and therefore are furnished with features otherwise unavailable on the alphachain.

DISTRIBUTED APPLICATIONS

Each Betachain carries a set of pre-coded smart contracts known as "DISTRIBUTED APPLICATIONS" which are tailored for a specific function. Each application is directly built for its host betachain and only needs to be activated to be available for public use.

BETACHAINS

CURRENT BETACHAINS

AFRICANWEALTH

SHAMWARI

BLOOM


AW
Africanwealth

INTRODUCTION

AFRICANWEALTH Betachain is Munhumutapa.Africa blockchain's economic and decentralised finance (de-fi) services host chain.

The Betachain carries the following applications:

- ✔ Totem Digital Assets
- ✔ P-Transactions
- ✔ Digital Certificates
- ✔ Decentralised Store
- ✔ Digital Currencies
- ✔ Domain System
- ✔ Ticketing
- ✔ Digital Streaming

P-TRANSACTIONS

PHASED TRANSACTIONS

The blockchain has a transaction semi-programmable capability that allows users to create autonomous transactions on the chain.

These types of transactions are called phased transactions (p-transactions). Like the popular smart contract, p-transactions listen to the betachain for set trigger transactions before executing a preset transaction.

Users can use a set of pre-built instructions to program their own transactions through various mixes and matches. These pre-built instructions are available to every account on the betachain and can be reasonably customised to suit most user's needs.

Types of P-TRANSACTIONS

APPROVAL TRANSACTIONS

These transactions require other relevant accounts' authority to be executed

BOOLEAN TRANSACTIONS

Transactions depend on a state of another account, transaction or time.

FOLLOW ON TRANSACTIONS

Transactions are triggered by another transaction on the blockchain

PERIODIC TRANSACTIONS

Transactions are executed at certain block heights . They can either set for before or after a block

TOTEM DIGITAL ASSETS SYSTEM

TOTEMS

Totems are digital tokens which are created on the Munhumutapa.africa blockchain platform hosted on the AFRICANWEALTH chain. Users can create unique assets based on their purpose focus or business. Totem digital asset creators have the power to name, set data, information and supply of their respective assets. Each issued asset has its own properties depending on the issuer's preferences.
The system is fairly easy to use and anyone can essentially create, distribute and manage totems without any advanced technical or coding skills.
The totem management system includes:

- Transfer restrictions
- Voting rights
- Dividend management
- Distribution tracking
- Supply management

The Totem Digital Asset System is also Non Fungible Token (NFT) ready through the issuance of singular totems supported by the system.

DECENTRALISED ASSET EXCHANGE

- The Totem Digital Asset system also includes a dex where created assets can be traded against its native betacoin.
- Issued totems can be made available for trade on the exchange platform. Users can BID for totems as well as set ASK prices.
- The Asset Exchange also allows the conduction of IDOs as well as ICOs for new project funding.

TOTEM ASSET SYSTEM

APPLICATIONS

- Decentralised Autonomous Organisations (DAOs) - formation and management.
- Non Fungible Tokens (NFT) - minting and management.
- Tokenisation of physical properties/assets - tracking and management

DAOs

DAOs are Decentralised Autonomous Organisations and the totem digital asset system functionality of the AFRICANWEALTH betaChain provides an accessible, cheap, transparent and efficient option for Africans to create and manage these ororganizations.

Using the system, in tandem with other functions such as munhumutapa applications, people can create, allocate equity and run organizations remotely with distributed control over of fund security, accountability and effective records management.

DAO CONCERNS

On the blockchain individuals from different parts of Africa can connect and resolve to start an organization. Among the problems that usually arise from such scenarios are:

Leadership

how and who is/are chosen as leaders.

Location

where to register and setup the organization

Capital

who invests how much and when and how.

Hiring

who hires and who approves those hired

CREATING A DAO

To create a DAO founding members with verified mIdentities can create a account which acts as the organisation's capital account. Founders can then deposit their initial investments into the account either in WEALTH coins or any of the SHAMWARI issued digital currencies with the founders issued with a totems as proofs of shareholding.

RESOLUTION	ACCOUNT	PURCHASE	ISSUE
Founders create an organisation	Organisation account is created	Investors purchase the issued totems	Investors acquire the DAO totem

NON-FUNGIBLE TOKENS

The Totem Digital Asset System can also be used in the rapidly growing digital collectibles arena of NFTs. Through the issuance of singular totems, NFTs can be minted with relative ease and immediately be secured by the blockchain.

Issuance of NFTs on the AFRICANWEALTH chain also carries the advantage of ready access to the Asset Exchange dex where they can be put up for sale, be traded or offers of purchase published.

Using the Totem Property of attributes of Munhumutapa issued totems, issuers can add data to their totems whicb may bind a physical product to a particular totem. Digital art and multimedia metadata can be permanently recorded in each asset thereby preserving detailed information of each issued NFT.

DIGITAL CERTIFICATES

Overview

Digital Certificates are immutable publicly verifiable, blockchain secured certificates issued via the Munhumutapa Alphablockchain platform. These certificates can not be altered, forged or reissued making them secure proofs of holding of a certified issue.

Munhumutapa Digital certificates are stored together with information of their issuer, recipient, date of issue and identification data of the issued certificate such that they can be used as a substitute for physical copies of certificates.

Digital Certificates are accessible from anywhere in the world on the blockchain which allows for cheaper and faster authentication and verification of Certificates in any use case.

APPLICATIONS

- Educational Certificates
- Compliance certificates
- Membership Certificates
- Attendance Certificates

QOUTETOPAY

QOUTETOPAY BILLING

MUNHUMUTAPA.AFRICA offers a feature which allows users to directly qoute an account through a blockchain certified request for payment. The qoute is signed by the qouting account and records the qouted account in an immutable state. The qoute is thus tamper-proof but publicly verifiable. The qoute can be downloaded for sharing via other means. The qouted account pays the billed amount when the account owner enters their passphrase. This feature is useful in Munhumutapa's use in the retail sector and integration with point-of-sale machines.

MESSAGING

MESSAGING SYSTEM

Each Betachain is eqquiped with a messaging system. The system allows users to send text messages that support file attachments to other blockchain accounts.

The messaging system supports message encryption, which allows for end-to-end enrypted message exchanges.
This encryption function makes the system suitable for the sharing of confidential and sensitive information and media with a guarantee of security and privacy.

VOTING AND POLLING

VOTING AND POLLING

The Polling System is a decentralised, publicly verifiable polls management application that lets users create, participate and verify polls on betachains.

The system is secured by the blockchain and guarantees transparent and credible digital voting to be conducted remotely and securely.

Poll creators can specify preferred poll conditions, time periods, eligibility and options which are enforced by the blockchain system itself.

Munhumutapa Identity Registry

OVERVIEW

The Munhumutapa Identity Registry is a decentralised digital identity documents registry and cloud storage platform. Through the system, users submit their identity information for verification before it is uploaded to the blockchain permanent storage.

Uploaded identities are all AES encrypted and can be downloaded from the chain by the owner or authorized parties provided they possess a shared key which they can only acquire from the owner who is the only party able to generate this key.

The blockchain stored identities can be used in cases of lost physical ID documents or cases of human trafficking where victims have their documents taken away forcefully. With the service, people will be able to confirm their identities anywhere in the world and find help through relevant authorities.

IDENTITY SYSTEM

For the IDENTITY chain to fulfill its purpose users will need to apply to have their identity verified and recorded.

APPLY

Users have to submit their identity details and a verification image through an established process.

VERIFIED

The submission is checked and verified for accuracy and authentication.

RECORDED

The details are identity file is uploaded to the blockchain where they are encrypted.

ACCESSING AND SHARING ID INFORMATION

When users want to share their ID information they simply generated a shared key which they can give to the intended recipient third party. This generated shared key allows the third party to view the users identity information while keeping it secure and protected from other public users.

The aim of the registry is to allow easier identity verification in a secure system as well as help facilitate remote registrations for seevices where KYC processes are required without excluding those in marginalised areas.

ACCOUNT DOMAINS

OVERVIEW

The domain application is the blockchain's account naming system that lets users register custom usernames for their accounts which other users can use to find and reference the assigned account.

Domains assigned to accounts carry a .mutapa appendix which basically confirms the existence of a domain and its respective ownership account.

Assigned domains are unique and no two accounts can be registered with the same domains but can however be transferred from one account to another provided the recipient account has no current registered domain.

STORE

OVERVIEW

The Store distributed application is a decentralised marketplace and shopping platform that allows the buying and selling of goods, products and services between users.

The application is underpinned by an escrow system that monitors and tracks purchases and deliveries to autonomously settle payments and deliveries for each transaction.

The Store aapplication achieves this autonomy by first holding off payment to a seller until a delivery is made by listening to the blockchain for delivery confirmations as well as checking for missed delivery deadlines in which case funds are returned to the purchaser.

Advantages of the STORE Application

- Sales across borders
- Trustless payments settlements
- Sales tracking
- Wider markets
- Access to goods and services on a continental scale.


ShamwariPay

INTRODUCTION

Shamwari betaChain hosts the payments and monetary system distributed app of the Munhumutapa Africa Blockchain. The chain facilitates the issue, distribution, governing of digital currencies for both government institutions like Central Banks and private institutions

SHAMWARI CURRENCIES

STABLECOINS/CURRENCIES

SHAMWARI Chain currencies are digital currencies currencies issued on SHAMWARI betachain. These digital currencies are to be used for private, public, corporate, local, regional and continental trade across Africa.

DEFI BANKING SERVICES

With the availability of a functional currency system, the SHAMWARI Chain can offers services which include:

- Money Transfers
- Loans
- Personal Banking
- Corporate Banking

SHAMWARI CURRENCIES

Currencies issued on the SHAMWARI Chain are issued based on a wide array of properties which the issuer can customise to create a currency policy in line with its intended use and functionality.
The properties which can be assigned to Shamwari currencies include:

Cryptographic Algorithms

Supply Controls

Currency Controls

Governership

Exchangeability & Transferability

MONEY TRANSFERS

SHAMWARIPAY is a money transfer system that enables users to send and receive funds from anywhere on the continent. By adding an external system of agents and facilitators, users can also deposit and withdraw fiat currencies through the system.

-DEPOSITS

1. Visit a registered agent
2. Deposit fiat currency
3. Receive equivalent Shamwari currency
4. Send Shamwari currency to any Munhumutapa account.

-WITHDRAWALS

1. Visit a registered agent
2. Transfer Shamwari currency to agent account.
3. Receive equivalent in fiat currency.

PERSONAL BANKING

Leveraging p-transactions, users can utilise the SHAMWARI Chain for all standard banking services to create autonomous payments and transactions.

Savings

Current Account

- Users can use accounts for receiving income salaries
- Accounts can be used for monthly payments
- Accounts can be set up as joint account
- Used for pay orders

CORPORATE BANKING

Services

- Salary payments
- Sales accounts
- Expenditure accounts
- DAO accounts
- Monthly bill payments

LOANS

Through the use of p-transactions and other forms of valued digital assets and coins, users and institutions can undertake lending and borrowings based on the digital collateral values. This is quite useful in cases where free funds are idle in user accounts.

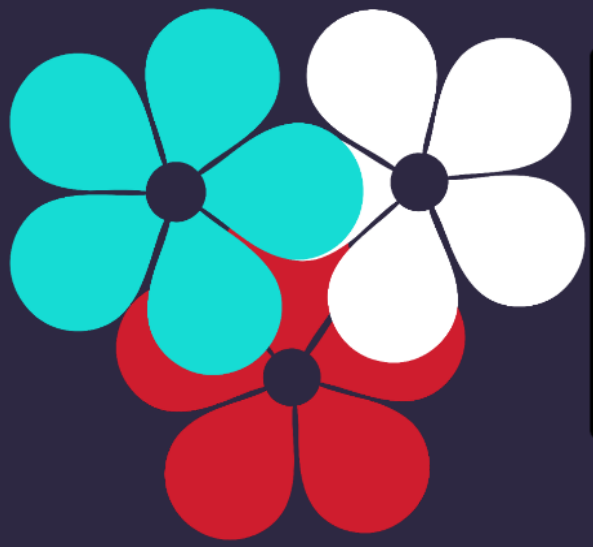
BORROWING

LENDING

Bureau De Change

The SHAMWARI chain provides a decentralised currency exchange (Bureau de Change) which allows holders of Shamwari issued currencies to exchange them for the MARI coin and vice versa. With the MARI coin as the intermediary currency, conversion from one currency to another is also possible.

Due to the decentralised system of the exchange, any user can set an 'Ask' or 'Bid' price for any exchange enabled currency which gives rise to real-time currency exchange rates.



bloom

BLOOM
BETACHAIN

OVERVIEW

The Bloom Betachain is an entertainment and digital media platform which offers services which include media copyright publications, media streaming, digital content management and distribution. On the chain, African content creators can distribute their content which can be purchased, streamed or rented with proceeds directly credited to their accounts with the payments system secured and enforced by the blockchain.The betachain handles the following:

1. Content uploads and verification
2. Subscription payments to content creators
3. Content purchases and streaming.
4. Royalty payments
5. Ticket sales

BLOOM MUSIC

Music

The Music distributed app hosted on the BLOOM Betachain is dedicated to the music industry . The app allows music artists to upload track data to the blockchain where it is stored and used as a verification copy for music productions. The data stored is track metadata which holds the intrinsic digital information of a particular track used to identify it for copyrights.

Bloom Music allows for the streaming of uploaded music with the proceeds from each stream credited directly into an artist's account without reliance on a third party facilitator. Music purchases are also supported on the app which include albums with the same direct payments system used in streaming.

By providing a decentralised music payments settlement system, artists can host their music on multiple sites but have all their revenue collected to one Munhumutapa account which make for greater flexibility, accountability and listernership statistics collections.

BLOOM WATCH

WATCH

BLOOM WATCH is a database for video content that provides a platform for the purchase and streaming of visual content. Content producers can list their productions on the platform which acts as a distribution platform for the content.

Content added to the WATCH platform can be any visual content frm music videos, film and television productions, documentaries and live events.

Viewers of content are able to purchase or stream this content through payments facilitated by the distributed app.

FUTURE BETACHAINS

FUTURE BETACHAINS

The Munhumutapa ecosystem also has betachains which are not yet integrated and are at various pre-development stages. These betachains will be opened up for use as development progresses.

SUGARBIRD MOBILE

A VoLTE focused MVNO for Africa relying on defi for data plans and packages.

KINGDOM

Gaming and Metaverse hosting betachain

COINOMICS

004

TRANSACTION FEES

TRANSACTION FEES

TOTEMS	POLL	ACCOUNT DOMAIN
m100	m0.01	m1

*All fees are in MUTAPA coin values and actual fees are paid in betacoins and depends on the exchange rate of the origin betacoin against MUTAPA Coin

The MUTAPA Coin is denoted by the letter m

TRANSACTION FEES

MESSAGING	CERTIFICATES	QOUTETOPAY
m0.1	m0.01	m0.01

1, 000, 000, 000

Total Supply of MUTAPA COINS

DISTRIBUTION OF MUTAPA COINS

RESERVE 25%

Locked & funds the development and management of the platform.

IGNIS AIRDROP 10%

Distributed to IGNIS token holders in order to satisfy the JPL v 1.2 license based on a snapshot taken at 12:00pm CAT on the 28th of August 2020.

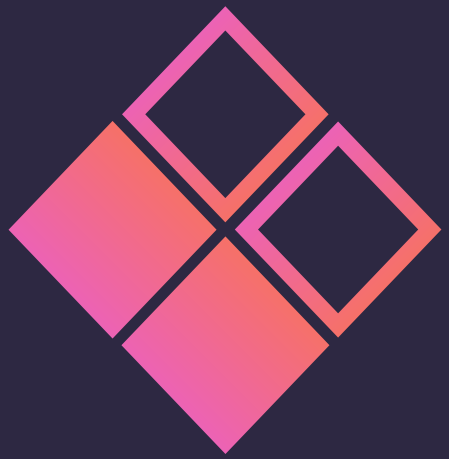
TEAM 14%

Distributed to the founders and development team.

VENDORS & EXCHANGES 10%

Allocated to exchanges for trade listings & to authorised agents and vendors for reselling

DISTRIBUTION OF COINS



IEOs 15%

This allocation will be sold to early adopters through a series of funding rounds which include IEOs and private seeding.

DISTRIBUTION OF MUTAPA COINS

CLIMATE FUND 5%

MUNHUMUTAPA DAO 10%

PROJECTS FUND 10%

MARKETING, BOUNTIES & AIRDROP 1%

ROADMAP

006

PHASE ONE

OCT 2019

Conception of idea

DEC 2019

Feasibility & Market Study

MAR 2020

Research & Study Of Existing Projects

MAY 2020

ARDOR chosen as base project for fork

JUNE 2020

Preparations to fork ARDOR

AUG 2020

Snapshot of ARDR balances on ARDOR

NOV 2020

Genesis Of Munhumutapa Blockchain

DEC 2020

Network and stability monitoring

PHASE TWO

JAN 2021

Release Of Project Whitepaper

MAY 2021

Start Of 1st round airdrop

JULY 2021

Update To project Whitepaper

SEPT 2021

Development Of nPOS consensus protocol

APRIL 2021

Recruitment of community ambassadors

JUNE 2021

End of 1st round airdrop

AUG 2021

Exploration of listing options

NOV 2021

Testing of nPOS consensus protocol

PHASE THREE

JAN 2022

Release of Munhumutapa 2.1.1

FEB 2022

Wallet UI updated

MAR 2022

Offers to list on 3 exchanges received

APR 2022

Listing suspended because of lack of funds

MAY 2022

Resolution to radically further develop the blockchain

JUNE 2022

Further development of Munhumutapa begins

NOV 2022

Continous development and testing of updates

DEC 2022

Review of development and further development recommended

PHASE FOUR

MAY 2022

Development of phase Three ends

JUNE 2023

Business exploration and market analysis

JULY 2023

Beta-Testing of Phase Three development begins

AUG 2023

Preperation of testnet for Phase Three development

SEPT 2023

Further tesing of Phase Three Development

OCT 2023

Testnet integration of Phase Three development successful

NOV 2023

Monitoring of testnet and new distributed applications

DEC 2023

Release of Munhumutapa 2.2.4 beta

PHASE FIVE

JAN 2024

Tsting of Munhumutapa 2.2.4 system and UI redesign

APRIL 2024

Possible listing if funding secured

JUN 2024

Sponsorship and partnership exploration

NOV 2024

Review of development and business partnerships

FEB 2024

Funding and Investment channels exploration

MAY 2024

Marketing and business engagement

AUG 2023

Phase Five development begins

DEC 2023

Testing of Phase Five development

007

INVESTMENT & FUNDING

Current Funding Model

- Due to the high-risk nature of development of blockchain technology, the development of Munhumutapa Africa Blockchain has been fully self-funded which has in some ways stifled growth.
- We are however open to future investment and funding to scale the project and any offers will be considered.

SEED FUNDING

INVESTMENT = $USD20 000

EXPENDITURE	ALLOCATION	DURATION	✔ NOTES
Online Digital Platforms Deveopment	**$USD 2 500**	6 Weeks	✔ Website Development ✔ Domain Registrations ✔ GitHub and Bitbucket subscriptions
App Development	**$USD 3 000**	8 Weeks	✔ Android App ✔ iOS App ✔ MacOs Desktop App ✔ Windows Desktop app
Online Marketing	**$USD 1 200**	12 Weeks	✔ Social Media Ads
Development Team	**$USD 12 000**	6 Months	✔ 2 Core Developers ✔ 1 UI/UX Developers ✔ 1 Project Manager
Development Equipment	**$USD 1 300**		✔ Purchase of Laptop, tablet, mobile Phone and Internet connectivity installation

INVESTMENT = $USD 38 000

**In addition to previous projected expenditures*

EXPENDITURE	ALLOCATION	DURATION	NOTES
Development Team	**+ $USD 7000**	8 months	✔ +1 Core Developers ✔ +1 UI/UX Developer
Marketing	**+ $USD 5 000**	6 months	✔ +1 Marketing Officer ✔ At least 3 Marketing Events
Legal	**+ $USD 8 000**	8 months	✔ 1 legal consultant ✔ Applications of operating Licenses in select countries

INVESTMENT = $USD 50 000

**In addition to previous projected expenditures*

EXPENDITURE	ALLOCATION	DURATION	NOTES
Legal Team	**+ $USD 7000**	8 months	✔ +2 legal officers
Licensing And Certification Fees	**+ $USD 5 000**		✔ Applications of operating Licenses in select countries

INVESTMENT = $USD80 000

EXPENDITURE	ALLOCATION	DURATION	NOTES
Exchange Listing	**$USD 30 000**	12 Weeks	✔ Munhumutapa Coin IEO and listing on onTop 20 exchange

**In addition to previous projected expenditures*

INVESTMENT = $USD 120 000

EXPENDITURE	ALLOCATION	DURATION	NOTES
Exchange Listing	**$USD 60 000**	12 Weeks	✔ Munhumutapa Coin IEO and listing on a top 10 exchange

**In addition to previous projected expenditures*

SWOT ANALYSIS

S

STRENGTHS

The multi-chain system makes for broader industry applications.

W

WEAKNESSES

Lack of an Ethereum type smart contract capability (future development)

O

OPPORTUNITIES

The platform will stimulate domestic African digital trade and the greater economy.

T

THREATS

Difficulties in creating USSD platforms due to reliance on mobile network operators.

IEO FUNDING

Overview

As per the distribution of MUTAPA coins, 15% is to be allocated for IEOs to raise capital funds for the Munhumutapa Africa Blockchain project.

The raised funds will be used to further develop the platform as well as the pursuit of operating licences for the platform in as many countries as possible. To achieve this goal the projecf will require a permanent team that is experienced, innovative and dedicated to this particular task. As such, such a team will have to be employed by Munhumutapa which will require permanently salaried employees office spaces, office hardware, and expenditures true of a fully functional organisation.

To this end, Munhumutapa shall conduct IEOs at the earliest possible opportunity to raise funds for the growth of the project.

Accountability With Funds

The use of raised funds will depend on the amount raised with the minimum target set at $USD 500 000.

Financial year budgets will require approval of MUTAPA Coin holders through Voting via the Munhumutapa Voting System

Accountability with the use of funds will be transparent and communicated to the public every financial year.

$USD 1 000 000 - $USD 2 000 000

- ✓ Employment of a development team of 10 (5 core developers, 3 UI/UX developers, 2 network monitors).
- ✓ Marketing team of 5 (2 marketers, 1 public relations manager and 2 graphic designers).
- ✓ Financial team of 2 (2 accountants).
- ✓ Legal team of 2 (1 lawyer, 1 legal assistant).
- ✓ Rental of small office space
- ✓ Purchase of basic office equipment

$USD 2 000 000 - $USD 5 000 000

- ✓ Appointment of a head-hunted experienced CEO and CFO
- ✓ Employment of a development team of 12 (7 core developers, 3 UI/UX developers, 2 network monitors).
- ✓ Marketing team of 6 (2 marketers, 2 public relations managers and 2 graphic designers).
- ✓ Financial team of 3 (1 Financial Manager, 2 accountants).
- ✓ Legal team of 3 (2 lawyers 1 legal assistant).
- ✓ Rental of small office space
- ✓ Purchase of all essential office equipment

$USD 5 000 000 - $USD 10 000 000

- ✔ A non-permanent board of experienced and reputable advisors and industry experts
- ✔ Appointments of COO, Head of Marketing, CLO.
- ✔ Employment of a development team of 12 (7 core developers, 3 UI/UX developers, 2 network monitors).
- ✔ Marketing team of 6 (2 marketers, 2 public relations managers and 2 graphic designers).
- ✔ Financial team of 3 (1 Financial Manager, 2 accountants).
- ✔ Legal team of 3 (2 lawyers 1 legal assistant).
- ✔ Rental of office spaces in different countries.
- ✔ Purchase of all required operations equipment and resources

$USD 10 000 000+ raised

- ✔ Appointments of General Manager
- ✔ Assembly of research team.
- ✔ Employment of a development team of 20 -25 (12 core developers, 5 UI/UX developers, 3 network monitors).
- ✔ Marketing team of 6 (2 marketers, 2 public relations managers and 2 graphic designers).
- ✔ Financial team of 3 (1 Financial Manager, 2 accountants).
- ✔ Legal team of 3 (2 lawyers 1 legal assistant).
- ✔ Rental of office spaces in different countries.
- ✔ Purchase of all required operations equipment and resources
- ✔ Setup of strategic Reserve fund of at least $USD 2 000 000 000

RESOURCES AND LINKS

008

LINKS

https://139.185.38.125:22024

Mainet Client Wallet

https://139.185.38.125:22024/test

Mainet API Console

http://193.123.67.177:22024

Test Client API
(Experimental)


munhumutapa

Do you have any questions?

Visit: https://munhumutapa.js.org

Email Us: munhumutapaalpha@oulook.com

GitHub: https://github.com/munhumutapaalpha/Munhumutapa

Bitbucket: https://bitbucket.org/munhumutapaalpha/munhumutapaalphablockchain/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