Sengoku Swap Finance：A Initial Swap Offering Based Platform

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Introduction

Starting with the publication of a treatise by Satoshi Nakamoto in 2008, many planners have designed various token economies and connected batons with the aim of realizing financial decentralization.

Numerous blockchain networks, including Bitcoin, have proved the usefulness of blockchain and succeeded in creating great value in this huge social experiment.

The advent of decentralized finance "Defi" in 2020 shocked the blockchain industry.

Operational protocols by leaving the administrator emphasized the credibility of the blockchain and succeeded in evolving the Bitcoin-type ecosystem without administrators.

In addition, due to these events, the industry is further steered into the field of non-fungible token "NFT" by utilizing the characteristics of stability.

A number of DeFi protocols have been created and the market-locked funding has exceeded US $ 40 billion.

The market size of Decentralized Finance, which shows the true value of blockchain, continues to expand, and various project teams continue to develop on-chain assets and off-chain assets, and create non-substitutable value. It is considered only a matter of time before the market dominance of the market and the platforms that support them exceeds the majority.

The new trading model that implements AMM that embodies P2P advocated by UNISWAP has solved some of the problems of DEX so far, but completely stress-free trading has not been realized. This is because the problems of the platformer Ethereum have not been completely solved.

SSF solves Ethereum's problems from the perspective of Web3.0, and proposes the development of the Asian DeFi market and a realistic next-generation trading model as Japan's first international decentralized exchange DEX by implementing AMM.
In addition, the Initial Swap Offering "ISO" will make the launch method using tokens more fair.

The liquidity bridge of the SSF governance token NOBUNAGA will enhance the affinity with the decentralized exchange DEX and the centralized exchange CEX.

In the future that SSF is aiming for, we plan to develop a "RAKUZA network" that eliminates the friction of data movement with various securities and values by using a decentralized ledger without an administrator.

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1. Abstract

1-1 Uniswap V1

Uniswap is an automated liquidity protocol that implements a system of smart contracts on the Ethereum blockchain. Users ensure liquidity by offering a percentage of ETH and other ERC20 tokens. Offer a pair of ERC20 tokens in one liquidity pool. All liquidity providers split a trading volume of 0.3% as a commission. Liquidity providers need to set the ratio of two ERC20 tokens.

For example, a liquidity provider creates an ETH-NBNG liquidity pool and then adds liquidity. The initial amount of ETH deposited is x0 and the number of NBNGs stored is y0, $x0 * y0 = c0$. Here, NBNG can be any ERC-20 token.

Liquidity Token liquidity provider (hereinafter referred to as LP) acquires a liquidity provider token (hereinafter referred to as LP token) used to represent the share of LP in the current liquidity pool. LP tokens are ERC-20 tokens that can be transferred without deleting the liquidity of the liquidity pool. Each liquidity pool has a corresponding LP token.

Swap Transactions After the liquidity pool is created and liquidity is injected, users holding ETH or NBNG can initiate swaps in the liquidity pool.

1-2 UNIswap V2

Uniswap V1 implements basic AMM exchange functionality, but it also has some issues. The contract cannot be upgraded, so to fix this issue, the development team reimplemented Uniswap V2 with the same basic features as Uniswap v1 and some new features such as:

(i) Create token pair
Instead of using ETH as an intermediary for Uniswap V1, users can directly create trading pairs of two ERC-20 tokens.

(ii) Oracle price
Adopt more reasonable price Oracle that makes it difficult to manipulate prices by using the price randomness of the transaction before the first transaction in the block

(iii) Flash Swap
The user can get the target token first and complete the swap later. Alternatively, you can return the token within a specific time so as not to trigger the swap process. This is the same as borrowing tokens in the liquidity pool.

(iv) Liquidity provider
The original 0.3% liquidity provider fee can be split into two parts, of which 0.25% is used by the liquidity provider in proportion to its contribution to the liquidity reserve, and 0.05% is sent to the pre-set address as the Protocol Fee, which can be used for different purposes.

These new features increase the usability of Uniswap. For the exchange functionality, SSF remains the same as Uniswap V2.

1-3 SengokuSwapFinance “SSF” layer 1

SSF launches AMM's Decentralized Exchange (DEX) protocol Uniswap model as the first phase.

The new decentralized exchange (DEX) protocol of the Uniswap model, which has had a major impact on the expansion of the Defi market, has created a huge tens of billions of USD market since 2020.
Uniswap's new DEX model has become an important point in the blockchain industry.

However, even with this model created by UNIswap, the decentralized exchange model still has obvious drawbacks. Specifically, it is as follows

▶High gas charges of tens of dollars are incurred to generate one transaction, which is a big barrier to the user's first step.

▶All users need to re-lick the information of at least one block to execute the transaction, and usability cannot be improved in the exchange.

▶ As a result of the emergence of various Dapps, an increase in users, and active trading, the Ethereum TPS limit problem puts the Uniswap model under fatal system design constraints.

The above problems are not the problems that only occur in Uniswap, but the problems that all DEXs have in common and should be solved. SSF tries to solve these problems.

1-4 SengokuSwapFinance”SSF” layer 2

SSF-UPbot is a layer 2 scalability solution. The basic idea is to aggregate a large number of transactions and then validate the proof on the chain. SSF-UPbot needs to analyze and validate these aggregated transactions through smart contracts and store the aggregated

transaction proofs on the chain using zero-knowledge proof technology. Reduce some data. All funds are locked to smart contracts and most calculations and storage are done off-chain

SSFnet is an implementation of SSF-UPbot, its v1 version is currently deployed on the Ethereum mainnet. Its basic operating principle is as follows.

The user sends the signed transaction to the validator.

In addition, the validator will be able to handle each transaction on the chain. This allows anyone to reconstruct the state later (each transaction).

The security of SSF-UPbot is similar to the security of the corresponding Layer 1. The reason is as follows.

Validators cannot tamper with the state or embezzle Layer 2 funds, as all state changes require corresponding proof and cannot be counterfeited. The private key is always in the user's hands.

Users don't have to stay online because they don't have to store any additional data.

SSFnet currently supports three operations:

Deposit: Transfer layer 1 tokens to SSFnet layer 2.

Withdrawal: Withdraw tokens from Layer 2 account and move to Layer 1 account

Transfer: Transfer tokens at Layer 2 without gas charges.

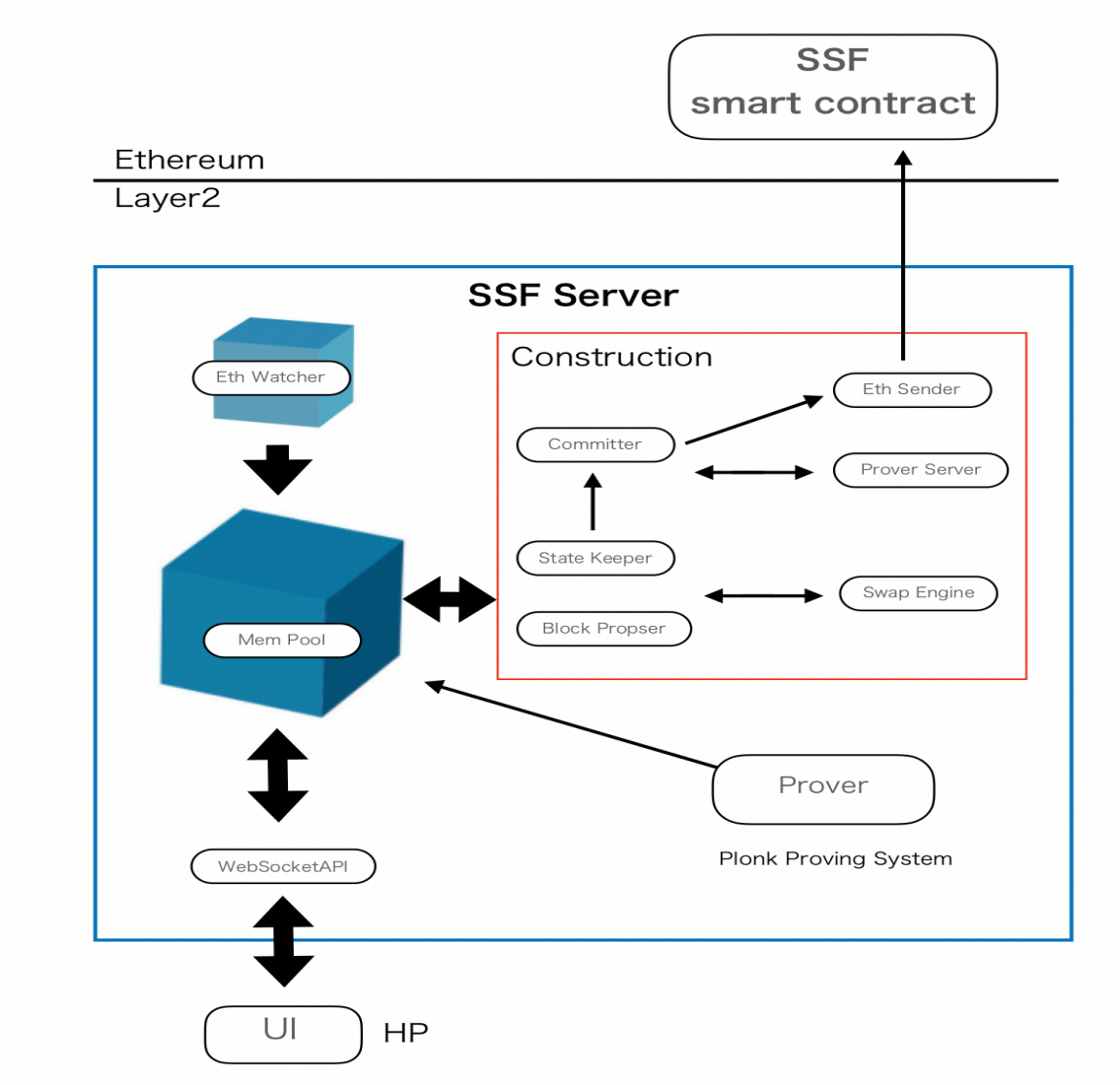
Therefore, SSF-UPbot can theoretically achieve 100-200 times the scalability of the Ethereum mainnet while significantly reducing gas consumption.

The SSF net model implemented in SSF Layer 2 uses SSF's ZK Rollup technology.

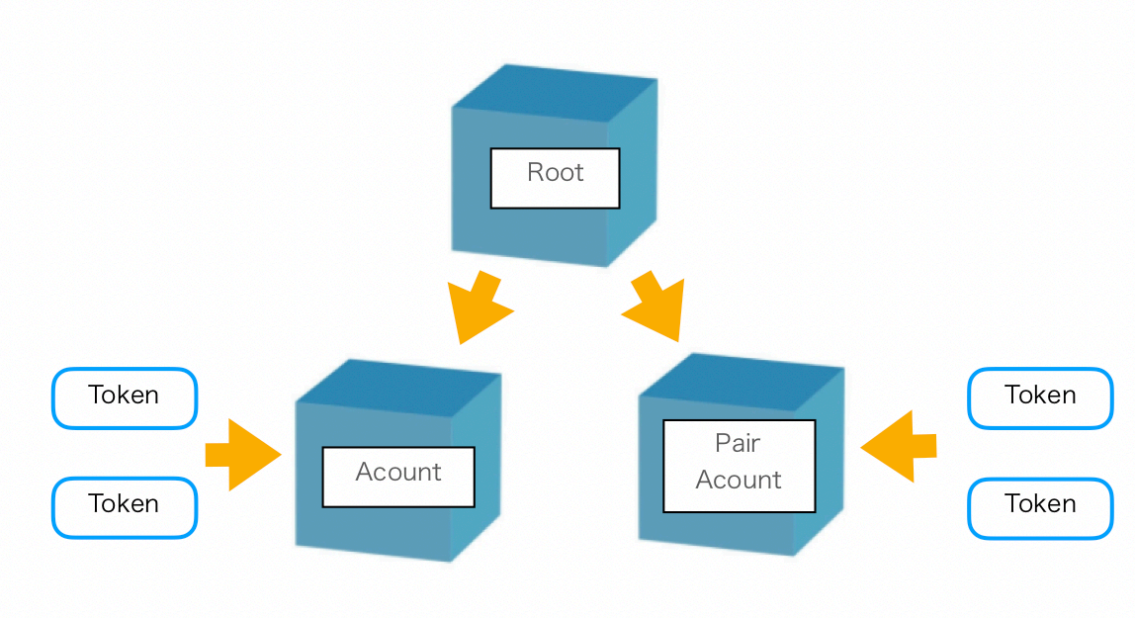
ZK-Rollup technology performs all Uniswap functions and ensures the core value of decentralized exchange.
SSF increases TPS by multiple digits compared to Uniswap, and transaction processing consumes very little gas charges.

SSF system architecture

The SSF system consists of an on-chain smart contract, an off-chain SSF server, a zero-knowledge proof system, and a front-end user interface.



2. SSF Layer 2 Account Node



SSF Layer 2 divides node management into two parts. The first regular account node records the status of all tokens in your account. The second pair account node records the status of the SSF liquidity pool for a particular token pair. Only two nodes are assembled in the pair account node. Each node represents the balance of one token in the liquidity pool.

3. The Ecosystem model of SengokuSwapFinance"SSF"(NBNG)

NBNG is an ERC20 token. As an SSF protocol token, NBNG is a key component of the SSF system. It is also a certificate for users to participate in governance, token listings, transaction validation, and buybacks. This white paper details NBNG's economy model.

■ NBNG token allocation and vesting

NBNG token allocation

NBNG is an SSF protocol token with a total of 1 billion NBNG. The SSF token ticker is NBNG. NBNG's smart contract address is
The address is
https://etherscan.io/token/0x9275e8386a5bdda160c0e621e9a6067b8fd88ea2

The distribution ratio of NBNG is as follows.

1. 60% to community mining:

600 million NBNG has been allocated for community mining. Over the first three years, 500 million NBNGs will be distributed and 100 million will be used for long-term incentives.

In the first year, 20% of the total token supply will be distributed, 5% of which will be used for airdrops. 15% in the 2nd year, 15% in the 3rd year, and 10% in total after the 4th year.

Community mining includes:

i. Proof of liquidity-mining (14% of total supply);

ii. Proof-of-Gas (9% of total supply);

iii. Proof-of-NBNG-Snarks (14% of total supply);

iv. Proof-of-TransFee (9% of total supply);

v. Smart contract staking (9% of total supply).

vi. Pre-mainnet launch airdrop to early NBNG holders 1: 1 to the initial liquidity. (4% of total supply)

vii. After launching the mainnet, airdrop to users of other major DeFi projects (1% of total supply);

2. 15% to SSF team:
150 million NBNG will be assigned to the SSF team with a one-year lockup from the launch of the mainnet. From the second year, 5% of the total token supply will be distributed to the SSF team every year until the end of the fourth year.

3. 8% to ecosystem developers and ecosystem growth:
8% of the total token supply, a total of 80 million NBNG, will be allocated to developer and ecosystem growth initiatives, distributed 2.0% annually over a four-year period.

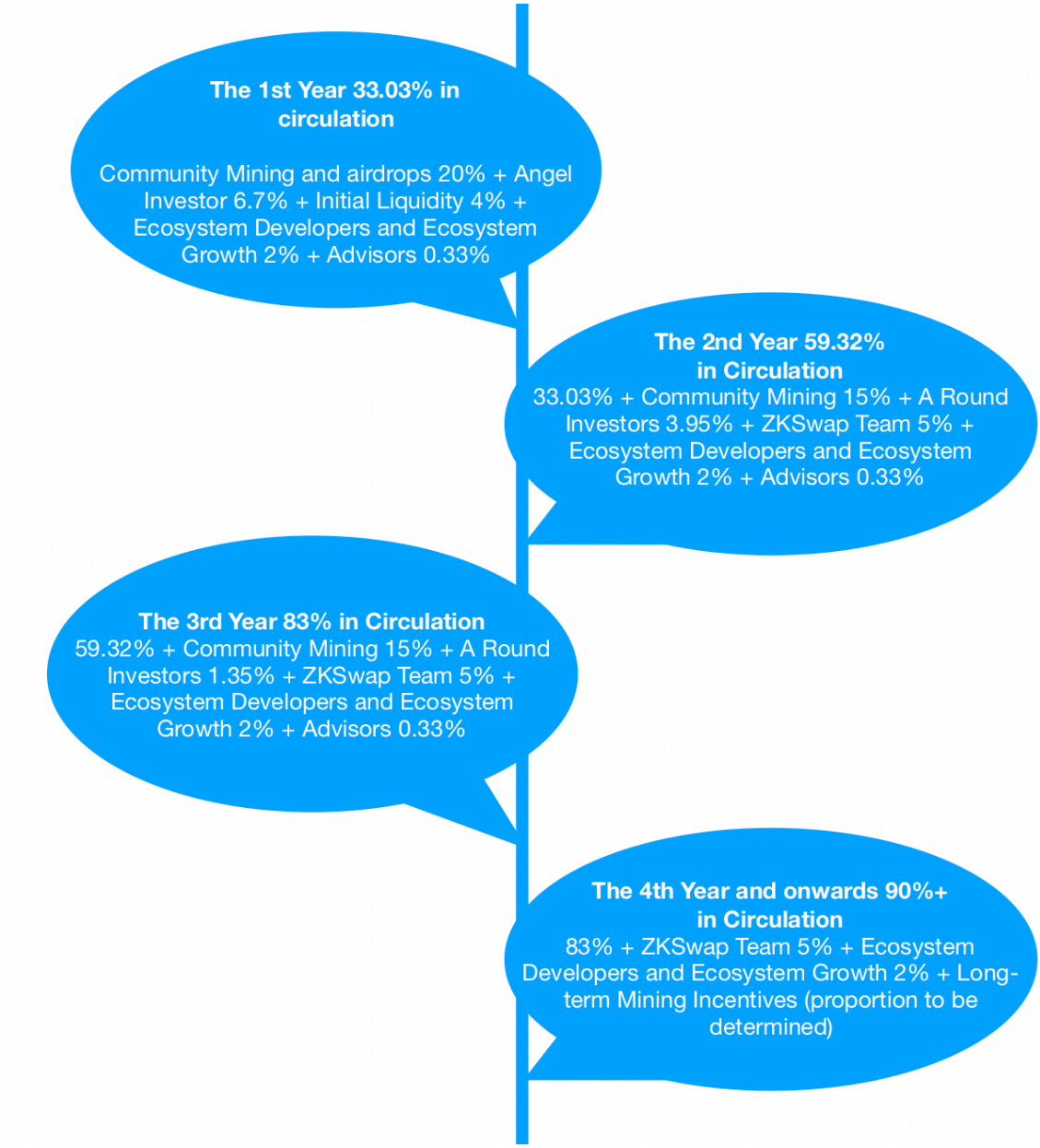
4. 4% to initial liquidity:
A total of 40 million NBNGs will be used to provide initial liquidity (NBNG-USDT) at Uniswap and Gate.io at 8 pm on April 10, 2021 Japan time. The initial current ratio is 40,000,000 NBNG / 3,000,000 USDT. Among them, 50% of the initial liquidity is allocated

to Uniswap and Gate.io, respectively.
5. 1% to advisors:
10 million NBNG, which is 1% of the total token supply, will be allocated to the advisor. Tokens will be distributed within 3 years and are 0.33% annually.

SSF is a community-based decentralized token swap protocol. Most protocol tokens are distributed through community mining and assigned to community members participating in the system. Tokens assigned to community mining make up 60% of the total token supply. Proof-of-Liquidity-Mining accounts for 14% of total token supply, Proof-of-Gas 9%, Proof-of-NBNG-Snarks 14%, Proof-of-TransFee 9%, and Smart Contract Stakeing 9%. The airdrop for early NBNG holders before the mainnet launch is 4%, and the airdrop for users of other major defi projects after the mainnet launch is 1%.

Developers are also important participants in the SSF ecosystem. They are responsible for building and maintaining the technical infrastructure. The official SSF team will be responsible for the development and maintenance of the SSF and will acquire 15% of all NBNG tokens within 4 years. Community developers and other developers who provide services or products to SSF users will receive 8% of NBNG tokens from the allocation within 4 years, some of which will be used for air drop and incentive programs for community members participating in early testing.

Within a year of the launch of the mainnet, 4% of the total supply of NBNG tokens will be used on decentralized trading platforms such as SSF and Uniswap to provide initial liquidity for NBNG



4. The series of Liquidity Yield Mining

Proof of Liquidity Mining (PoL)

Liquidity is the most important factor in SSF's trading experience. Therefore, 14% of the total supply in the system will be distributed through the Proof of Liquidity Mining to reward SSF liquidity providers.

Proof-of-Gas (PoG)

For each SSF Layer 2 transaction, the SSF must send a zero-knowledge proof to Ethereum Layer 1 for security. A certain amount of gas charges is consumed for each interaction with Ethereum Layer 1. In SSF Sync and other SSF Upbot based systems, this part of the gas cost is paid by the user.

All Layer 2 transactions in the SSF system require a lot of computation because they need to generate zero-knowledge proofs and send them to Ethereum Layer 1. Early in the project's launch, the SSF team deployed a number of high-frequency AMD CPU servers to generate zero-knowledge proofs (NBNG-Snarks). In fact, as long as NBNG-Snarks are sent to Layer 1 in time, it doesn't matter who creates and serves NBNG-Snarks. Theoretically, the more people who participate in proof generation, the higher the TPS of the system, and the more secure and real-time transactions can be achieved.

Proof-of-TransFee (PoT)

SSF is a new generation of Layer 2 decentralized exchanges, and token swaps are at the core of the entire system. To give users incentives, SSF has introduced Proof-of-TransFee (PoT, proof of transaction fees). All users trading at SSF Layer 2 will get NBNG according to the number of daily transaction fees paid.

Governance
SSF supports a limited number of trading pairs, except for the first trading pair set up by the SSF team. Users holding NBNG may vote or pledge to NBNG to list certain tokens.

NBNG holders can initiate a coin listing proposal through the governance process described above and can list coins if they receive a majority of votes.

-If you have a large amount of NBNG, you can pledge NBNG for listing.

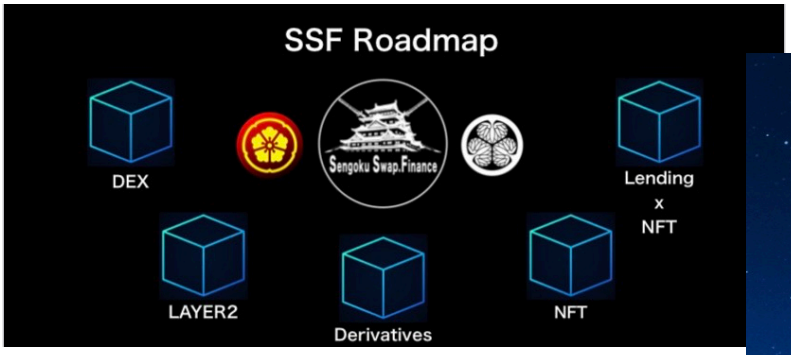
The SSF team will carry out the listing of tokens based on the outcome of the vote or pledge. All users can create trading pairs and add liquidity after one token is listed.

NBNG protocol fee

Under SSF contracts, 0.3% of all Layer 2 swap transactions are charged as transaction fees. Of that amount, 0.25% will be automatically allocated to liquidity providers and the

remaining 0.05% will be used as protocol fees. All protocol fees (100%) are used as a long-term incentive for the project and SSF personnel do not receive transaction fees.

5. Conclusion



Aiming for No. 1 decentralized exchange (DEX) in Japan, SSF will develop various services centered on the Decentralized project

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SSF is developing online games in addition to Decentralized Finance

We are currently developing external connection Dapps such as fair trading games that are not tampered by smart contract management without an administrator, and NFT✖ games that utilize the non-substitution nature.

①Highlow Decentralize Yield System（HDYS）

🔥Descentralize Betting Game🔥

Fully automatic operation of betting for various future predictions without an administrator.

HDYS can be increased in the complete fraud elimination market.

②Sengoku Online World（SOW）

🎮 Digital Monopoly NFT Market Game 🎮

Character trading card

Castle 🏯 Weapon 🗡 Treasure

Training, buying and selling, development, employment, robbery, joint struggle, lending

Virtual exclusive game using P2P

③Dream Box

📽️ 2D hologram x AI x NFT 📽️

Create a platform that realizes the dream matchup of martial arts athletes around the world.

Realize the dream battle of great fighters with 2D hologram technology and big data.

NFTs can create the value of a century matchup.

NFT store RAKUZA

Japanese art "manga, animation" x NFT

The Louvre Museum in France, which reigns at the top of art, categorized "manga / animation" as the ninth art in 2020. "Manga Exhibition" was held at the British Museum last year, and will be hold at the Museum of Modern Art in New York in 2021.
The words "manga" and "animation" have become the movement of modern art in the 21st century not only in Japan but also in the world of art.

Not only global auction companies, famous Japanese auction companies such as Mainichi Auctions, Shinwa Auctions, etc., have made regular distribution of cels and manga originals over the past year.
In other words, it can be said that it has begun to secure an absolute position in the world of contemporary art.

Diversity of Japanese manga
A survey of popular manga in each country reveals the national character and social situation. For example, "Doraemon" is the most popular Japanese manga in a country that is making a leap forward in the IT industry, and war manga is preferred in countries where conflicts are constant. This diversity is thought to be one of the reasons why Japanese manga is popular in every country in the world. In other words, Japan does not have manga that can be received by everyone, but there are so many types of manga so that everyone can find what they can receive.

Japanese culture and ideas
Osamu Tezuka, who is famous for his masterpiece "Astro Boy", a pioneer of Japanese manga, told and advised younger manga artists, "When drawing manga, you should touch more on movies, literature, art, and first-class products than reading manga itself". It is said that this had a great influence on the later development of manga culture. Therefore, Japanese manga is highly evaluated not only in the story but also in the style of painting. Western paintings have a tradition of filling every corner of the screen, but Japanese manga does not stick to "margins" like ink paintings, so sometimes it gives meaning to the margins themselves, which are close to blank paper. It could be influenced by Ukiyo-e, but like Ukiyo-e, the style of this Japanese manga shocked the world.

With the development of the IT industry, Japanese manga has become more widespread throughout the world. However, there are some problems in publishing the work that manga artists really want to express.
There are various barriers to development under centralized control, such as national cultural regulations and copyright regulations.

To solve that problem, we will realize Satoshi Nakamoto's "question", that is, an administrator-less P2P platform that does not require a trusted third party.

Phase 1 Art NFT Stable

As the first phase, digital cels and original drawings will be projected on smart contracts with the actual cels and manga originals as collateral, allowing anyone to freely display and have auction.