KTSwap White Paper

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Forward

Blockchain technology has made great progress with regard to growth and adoption in distributed finance through 2020. During 2021, DeFi has continued this explosive growth amid gains in popularity. By the beginning of May, 2021, the total value locked up for DeFi had exceeded US $110 billion, reaching a new record high. The growth potential is simply amazing.

The core infrastructure of DeFi is the DEX (decentralized exchange). During 2021, the DEX has also reached a new peak of market scale and trading volume. And this is just the initial development stage of DeFi. Considering how big the traditional financial market has become, will give a perspective on how big DeFi will grow in the coming years. The KTSwap project was envisioned to promote the development of DeFi.

1. Project introduction

Ktswap is a decentralized exchange based on the Huobi ecological chain (hereinafter referred to as Heco). It integrates the automated market making (AMM), community self-governance (DAO), liquidity mining and token pledge mining (Staking). Also, it brings a new income distribution mechanism and service charge feedback mechanism to maximize capital gains for all participants. Ktswap aims to promote the automatic exchange transaction of all high-quality digital currencies on the Heco chain, automatically provide liquidity on the Heco chain, and provide users with a more secure, reliable, diversified and cost-effective transaction experience.

Higher transaction activity makes more value for users, and brings better user clustering effect at the same time. KTSwap, as a fully functional DEX, combines the advantages of a low transaction cost of Heco and revenue generation opportunities of the Ethereum ecosystem. It is compatible with a variety of smart contracts including Ethereum and Heco chain. Ktswap is completely decentralized. Users are free to deposit tokens for exchange and withdraw freely. There is no registration, authentication and withdrawal restriction in a centralized exchange. The transaction counterparty is not other trading users, but the token pool, which utilizes an automated market making model to calculate the transaction price.

2. Technology Program

Ktswap is part of the future plans of the Huobi ecological chain. The bottom public chain is Heco. The block generation rate is 3 seconds when TPS reaches 500. It can fulfill the demand of users in terms of safety, speed, ease of use and investment flexibility.

2.1 Definitions

(1) Liquidity Pool

A system account without private key control, used to store two counter exchangeable assets.

(2) Liquidity

Mortgaging two assets into the liquidity pool will help to provide liquidity for the liquidity pool. When the mortgaged assets are retrieved, the liquidity provider will automatically receive the relevant service fee charged during exchange transaction processing.

(3) AMM(Automated market maker)

Also known as the liquidity provider (LP), and refers to an entity that provides liquidity on an exchange.

(4) Increase liquidity

Market makers can mortgage their tokens to the liquidity pool to obtain the service fee charged during the exchange process. After the mortgage is completed, the system will lock the pledged token and issue a liquidity voucher to the user's account.

(5) Token exchange

After LP adds certain tokens to the liquidity pool, users can initiate an exchange transaction according to their own needs. During the exchange process, a certain service charge will be deducted from the token input by the user.

(6) Liquidity withdrawal

After mortgaging tokens, the market maker will receive the liquidity voucher to the two corresponding tokens. The market maker can use the voucher to exchange the pledged token and also receive relevant market making rewards. After withdrawing liquidity, the same amount of liquidity vouchers will be destroyed from the user's account and liquidity pool.

2.2 KTSwap technical solution

2.2.1 AMM with Higher efficiency and lower slippage

AMM trading pool is one of the core functions of KTSwap, which provides users with low complexity and low gas cost transactions. While allowing investors to obtain income simply and quickly, investors can also further obtain income appreciation by providing liquidity.

KTSwap uses the constant product market making formula: $X * Y = K$

X represents the number of token A, Y represents the number of token B.

During the exchange progress, the value of K remains unchanged. Only when the market maker increases or decreases liquidity, the value of K will change.

The AMM of KTSwap has below advantages:

(1) Higher efficiency and lower slippage

KTSwap extends the CFMM low slippage model to volatile assets, dynamically updating the reserve weight of the liquidity pool while keeping the reserve value at the ratio of 1:1. This will ensure that the AMM transaction of KTSwap can expand the liquidity in the common price area, greatly improving the capital utilization, and providing a lower transaction slippage.

(2) Optimize temporary loss

KTSwap will introduce Oracle smart contracts to integrate data from external sources of the blockchain, and to extend the concept to assets with variable exchange rates. Arbitrageurs no longer withdraw value from liquidity providers in the form of temporary losses, but balance token distribution in the AMM pool to deal with token trading.

2.2.2 Liquidity mining

KTSwap users can deposit or lend designated tokens to provide liquidity and obtain income. The KTSwap platform continuously provides investment solutions of potential digital assets. In the initial stage, four trading pairs will be launched, then in the later stage, the new trading pair launching will be decided by voting of the DAO community governance.

2.2.3 Impermanent Loss

Oracle smart contracts will ensure the AMM pool will operate with an accurate exchange rate. The Oracle will update the asset price of the liquidity pool, and adjust the weight of the AMM pool, so that the internal exchange rate will match with the external market price, and ensure the asset pool will remain stable and balanced, while helping reduce impermanent loss of the LP.

2.2.4 Decentralization

KTSwap is completely decentralized with implementation of transparent transaction mode and anti censorship use mode.

2.2.5 Set transaction restriction

The maximum investment for each address is 1wU. Each pool can max. increase 1000wU. So more users are able to participate.

3. Economic and governance model

3.1 Basic information

Total quality of KT token: 10million pieces

Token sources	Proportion	Quantity (piece)	Rules of release
Liquidity mining	85%	8,500,000	In first month, daily output is 23,000pcs KT; from second month, reduce 3% per month.
Collaborative team reward	5%	500,000	Started from the month of online, equally unlocked in 10 months according to the quantity of blocks.
Founding team	2%	200,000	Started from the month of online, equally unlocked in 10 months according to the quantity of blocks.
Market and community	8%	800,000	Started from the month of online, equally unlocked in 10 months according to the quantity of blocks.

3.2 Value and Equity

3.2.1 Liquidity mining

Users who hold KT can participate. In first month of mining, the daily output is 23,000pcs KT; and output will reduce 10% per month beginning the second month.

Pool	Daily output
KT single pool	10,000
KT-USDT	5,000
KT-HT	5,000
KT-MDX	3,000

Total:	23,000

3.2.2 Automated market making transaction

KTSwap charges each AMM transaction 0.3% of the transaction amount as a service charge. Among which, 0.2% is allocated to liquidity provider, 0.05% is allocated to the platform for promotions and buy back, and the remaining 0.05% is as incentive to the DAO community. The KT token can be used to pay transaction fees.

3.3 Mining ecology

3.3.1 LP mining area

Pool creation rules: users can create Liquidity Pool (LP) in the trading area. When the total asset value of LP reaches 100,000 USDT or above, and the handling charge for three consecutive days reaches 100 USDT or above, the corresponding LP of the project will go online in the LP area for mining within 48 hours.

For example, when the total asset values of ABC and HUSD in ABC-HUSD (LP) add up to 100,000 USDT and above, and the transaction handling fee of ABC-HUSD (LP) reaches 100 USDT for three consecutive days, the LP will go online in mining area for mining KT within 48 hours.

Token generated by individual *= individual's pledge capital ÷ total pledge capital of the pool × Daily token production quantity of the pool*

Off shelf rules: when the daily transaction fee of LP is less than 100 USDT for several consecutive days, it will be removed from the LP mining area.

Incentive object: the platform will provide 2-3 times of mining coefficient incentive in the first week of a new project launch.

3.3.2 Single token mining area

What is the single excavation area? It refers to a mining area that can be mined by pledging a single currency. Users only need to pledge a single currency in this area to participate in KT mining.

In the first phase, single token mining area can launch KT mining area only.

Token generated by individual *= individual's pledge capital ÷ total pledge capital of the pool × daily token producing quantity of the pool*

Example:

Individual invested 10000HUSD in KT mining pool, that is, KT mining area will generate 10000 tokens per day. KT pool total pledged capital is 1million HUSD, then,

Individual's token producing quantity = 10000÷ 1 million × 10000 =100KT

3.4 Community self-governance Decentralized Autonomous Organization (DAO)

3.4.1 Operation principle

Users obtain voting rights of the community by exchanging KT, and then have the ability to influence its operation mode. All transaction records are maintained on the blockchain, making the DAO completely transparent. Everyone who has bought KT can make suggestions about the future of KTSwap, and then the community votes on the proposal. When most people reach a consensus, the platform will implement the result.

3.4.2 Governance model

KTSwap uses a DAO contract for its operation. All major decisions are recorded, including but not limited to: weight parameters of the liquidity pool, handling charge ratio, buyback and destruction ratio, KT token production reduction strategy (maintaining continuous KT production reduction) etc., will be initiated and voted on by the DAO community, to ensure real decentralization.

4. Blueprint - Cross-chain bridge

In a future release, KTSwap will support the ETH/BSC chain. KT will issue it's benchmarking tokens on different main chains. Tokens will exchange through KTSwap. KTSwap cross chain bridge is an open source project developed on Substrate. Combining a Relay Service and multi signature mechanism, it can build a secure, flexible and scalable cross chain without modifying the core functions of KTSwap. The overall technical solution includes three aspects: inter chain communication, runtime module and a security guarantee. At present, we're working on the development of inter chain communication underlying module, including RPC interface encapsulation, node transformation, etc..

With the cross chain transfer bridge, KTSwap ecological can effectively extended to other chains. The application space will be quickly realized. Users can transfer their assets cross chain, enabling other applications in the Relay chain. For example, through the cross chain transfer bridge, developers of DeFi, DEX, and the Stacking service can realize the cross chain smart contracts interoperation, reduce multi chain development cost, realize multi chain users sharing, and data interconnection.